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Beginning Teacher Induction in the State of Colorado

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BEGINNING TEACHER INDUCTION IN THE STATE OF COLORADO

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ABSTRACT

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The purpose of the study was to gain a deeper understanding of teacher induction in the state of Colorado. The guiding question for the study was "What components do Colorado school districts include as part of their beginning teacher induction?" The study examined the implementation of nine teacher induction components: orientation, mentoring, adjustment of working conditions, release time, professional development opportunities, opportunities for collegial collaboration, assessment of beginning teachers, program evaluation, and follow-up.

Data pertaining to beginning teacher induction and the nine components recommended for comprehensive teacher induction were gathered within the state of Colorado. School district superintendents or their designees and Board of Cooperative Educational Services Executive Directors made up the sample for the research study. Responding districts were asked to identify which components were or were not included in the district induction programs for beginning teachers. Data were analyzed for components included as well as district size in relation to components included.

Evidence was found that beginning teacher induction and its nine components are being implemented in numerous districts across the state of Colorado. Although the responding sample was only 19% of the proposed sample, consistency in implementation

was found across districts regardless of district size. In addition, induction components most likely to be left out were similar across the school districts in the state of Colorado.

Although the study gathered some information regarding teacher induction component implementation within school districts in the state, it did not give a clear picture regarding what specifically was implemented within each component. Further research involving a mixed method with a survey to gather initial data around induction components provided, combined with interview data with school district personnel questioning the specific provisions within each component, would help inform educational leaders and policy makers about what is truly provided within the state of Colorado as well as what is needed.

Finally, recommended teacher induction components were shown to be present in the majority of responding districts. The next step in the analysis is to look at the retention rates of those districts. The question to be ascertained is whether the provision of these induction components is having an impact on the retention of teachers within the districts.

DEDICATION

To my husband, Boyd, my staunchest supporter through all of my educational endeavors, thank you for never letting me give up and making sure I got it all done. Thank you for loving me even when I was grumpy!

To my children, Charlie and Libby, thank you for being my inspiration and my joy. I am blessed to be your mother.

To my parents, John and Myra, thank you for always believing and encouraging me when I wanted to give up and loving me through all of my craziness.

To my grandmother, Anita, for fostering in me the desire to help others learn.

Finally, this is dedicated to all the beginning teachers in America. There is light at the end of the tunnel and support out there for you. Seek out schools and districts that will nurture and guide you in the beginning and throughout your journey as an educator.

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CHAPTER I

INTRODUCTION

In third grade, I discovered my one true passion--teaching. My teacher, Mrs. Futch, saw my potential and began to nurture it. I started as a "peer tutor" for my friends and classmates, progressed to reading literature out loud, and, finally, shared my understanding of a lesson to the entire class. I thrived on helping others understand and practice the learning being provided. This passion of mine is still alive and flourishing after over 25 years in the education profession.

In August 1989, I entered the first classroom I could truly call my own. I remember the smell of the room, my joy when I discovered my very own supply closet, and my nervous excitement leading up to the first day of school. I felt truly prepared and ready to teach a classroom full of eager students. Sadly, I was mistaken. I vividly remember telling my husband I was not sure why I went to college because I did not learn anything about how to be an effective teacher.

Even with my passion for teaching, I floundered in my first five years and wondered if this was the profession I needed to be in. I received no formal induction and little support from my administrator or colleagues. I struggled with classroom management and actual instruction. Being a natural born learner, I signed up for any and all professional development available to me through the educational cooperative linked to the nearby college. Slowly, I began developing my understanding of classroom

management and what I envisioned for my own classroom. During this time, several of my college classmates left the field of teaching due to their complete frustration with the lack of preparation they had been given and frustration with the profession. I recall being shocked that these teachers would just give up.

For 25 years, I have repeatedly asked, "Why are teachers, myself included, not prepared to enter the classroom and hit the ground running?" It is not an easy question to answer nor are there any easy solutions. However, young children of our society are being jeopardized daily because their teachers do not have the skills necessary to be effective instructors. As an administrator for nine years, I daily faced the question of how to support these teachers and help them be the effective educators their students deserved. I know I am not the only administrator, teacher, educator, and parent who despairs over the quality of teachers who are placed into classrooms each year. Our students deserve the very best and I believe it is our responsibility to ensure they receive the best. I know administrators who struggle just as I struggled and wonder what to do to help their beginning teachers. The purpose of this descriptive study was to build a solid understanding of the status of teacher induction in the state of Colorado. Through this research, I hope to influence policy in the state of Colorado, thereby impacting induction for beginning teachers, which in turn can impact the success of our students.

The goal of this research study was to gain a deeper understanding of teacher induction in the state of Colorado. Although extensive information exists regarding teacher induction and its positive impact on teacher quality, little is known regarding teacher induction implementation in the state of Colorado. This research study investigated answers to the following research question:

Q1 What components do Colorado school districts include as part of their beginning teacher induction?

Background of the Problem

Every August, thousands of beginning teachers enter classrooms of America excited, scared, and ready to begin the journey of a teaching career. Every June, 50% of these new teachers leave the field (Ingersoll & Smith, 2004; Park, 2003). Research studies conducted at the national and state levels identified some key issues influencing a beginning teacher's decision to leave (Bolich, 2001; Costigan & Crocco, 2004; Ingersoll & Smith, 2004). These issues included inadequate preparation, disruptive school and classroom conditions, chaotic teaching environments, high stakes assessments, poor leadership, nominal salaries and benefits, and society's lack of appreciation for teaching as a profession (Bolich, 2001; Costigan & Crocco, 2004). In addition, Bolich (2001) discovered when teachers had taught less than five years and had not taken part in a teacher induction program, there was a 50% greater chance they would leave the profession. Brown (2003) contended that teachers who participated in a teacher induction program that included mentoring were twice as likely to remain in the teaching profession and become more effective professionally.

The current model of teacher support, which might or might not include teacher induction, has proved ineffective as demonstrated by beginning teachers leaving the profession in large numbers for other jobs (Bolich, 2001; Brown, 2003). The average length of a teacher's career in the United States, according to a report (Haberman, 2007), is a maximum of 11 years. In short, the United States is facing a growing challenge of having highly qualified and effective teachers in classrooms while at the same time losing entry-level teachers early in their careers.

Historical Context

In the 1970s, schools and districts began conversations centered on the induction of new teachers (Fallon, 2004). Philosophies surrounding teacher induction were wide and diverse and, therefore, educators came to little agreement in the delivery of teacher induction (Fallon, 2004). Teacher induction program components were implemented throughout the 1970s; by the 1980s, several states were mandating teacher induction programs through policy change (Fallon, 2004). The 1990s brought about pilot programs in many states, all searching for the most effective means of providing teacher induction programs for beginning teachers (Klemick, 2008). By 2008, 25 states had some form of mentoring that was required and funded; within those, 20 states had standards established regarding mentors, the necessary qualifications of a mentor, and how a mentor was assigned to a beginning teacher (Klemick, 2008).

A report released in 1983 by the National Commission on Excellence in Education (*A Nation at Risk*) raised the nation's level of concern regarding the state of education in America. The report depicted U.S. schools as deficient entities that were not preparing the next generation to be productive citizens. In addition, the report led the nation to believe the United States would no longer be competitive in a world market. The result of the report was the overwhelming belief that the education system of the nation needed to be reformed (Fallon, 2004). The focus of this reformation was on teachers; however, that focus was on salaries and the quality of schools rather than on teacher quality and teacher induction (Hunt, 1996). An additional report, *A Nation Prepared: Teachers for the 21st Century,* published in 1986 resulted in the formation of the National Board for Professional Teaching Standards (Fallon, 2004).

Recommendations from this Board were the beginnings for the teacher induction movement (Fallon, 2004). During the past decade, the policy focus has turned to teacher quality driven by the passage of the No Child Left Behind Act of 2001 (NCLB; 2002). No Child Left Behind turned the national focus to teacher quality with its requirement for "highly qualified" teachers (Fallon, 2004, p. 7). A highly qualified teacher in the context of this study is an effective instructor regardless of the content taught. No Child Left Behind serves as the latest iteration of ESEA and President Bush's attempt to ensure all students have the opportunity to reach high academic standards (Fallon, 2004). Teacher quality has been found to have a strong impact on student success and the components of comprehensive teacher induction programs can advance that quality of teaching exponentially (Fallon, 2004).

Teacher Shortage Versus Teacher Attrition

In 1996, Linda Darling-Hammond (2001), reporting for the National Commission on Teaching and America's Future, warned the education community and the nation that there would be a tremendous teacher shortage and at least two million teachers would need to be hired within 10 years. According to Ingersoll (2003), the political response to the perceived shortage has focused on the area of teacher recruitment. The prevailing issue, however, is not recruiting of teachers but rather the retention of teachers. The need for new teachers is not due to enrollment numbers or retirement of older teachers. It is due to pre-retirement teacher turnover (Ingersoll, 2003).

Ingersoll (2003) completed an extensive review of the Schools and Staffing Survey (SASS) and determined there was indeed a rise in the demand for teachers; however, there was not an insufficient amount of available teachers. The issue was the

retention of beginning teachers. Turnover deeply affects schools. Positive effects are seen in student achievement and school culture when every classroom is staffed with a highly qualified teacher (Ingersoll, 2003). There is evidence that teacher induction programs along with incentives and recruitment pathways can ensure each student has the teacher he/she deserves (Barnett, 2004).

Teacher Induction Impacts

Teacher attrition has genuine fiscal impacts as reflected in budgets, achievement gaps, and school culture (Huling, 2006a). These impacts drain both school finances and personnel, which can produce a negative impact on the formation of learning communities (Costigan & Crocco, 2004). An estimate of costs when a new teacher leaves a school has been quoted as approximately $12,000 in rehiring expenses (Fallon, 2004). If this expense equals 50% of what a beginning teacher earns, there could be a potential return of approximately 25% for every dollar spent on teacher induction programs (Villar & Strong, 2007). Teacher attrition and an unrelenting achievement gap across the diverse student populations accentuate the need for comprehensive teacher induction programs to improve the quality and effectiveness of teaching, thereby improving the achievement of students (Feiman-Nemser, 2010). Funding to support teacher induction programs is an essential expense to safeguard the investment in each beginning teacher (Huling, 2006b). Teacher induction costs could be supported by reducing attrition rates and retaining dollars lost when beginning teachers leave (Carver & Feiman-Nemser, 2009).

Education demands are increasing, students and their needs are changing, and accountability systems are requiring schools to meet the challenge of improving student

learning (Hunt, 1996). Common Core State Standards (Colorado Department of Education, 2016) require students to do more than simply learn the facts; they must incorporate their knowledge and understanding and apply them to complex situations. Therefore, teachers must be better prepared to meet the changing needs of students and accountability (Hunt, 1996).

Education has changed in the past decade; however, beginning teacher support and teacher induction have failed to meet these changing needs. If the United States is to have highly qualified teachers, then the area of teacher induction must be closely examined to determine which components of teacher induction are most effective in supporting and retaining beginning teachers (Barnett, 2004). Comprehensive teacher induction programs are professional development systems designed to provide multifaceted support for beginning teachers (Fallon, 2004). The mission of comprehensive teacher induction programs is to support beginning teachers in their growth and development as effective teachers (Feiman-Nemser, 2010). Comprehensive teacher induction programs can provide the support necessary to retain quality teachers (Arends & Rigazio-DiGilio, 2000). A comprehensive teacher induction program should include support in the areas of classroom management, instruction, stress and workload issues, and how to manage time and relationships with key stakeholders including students, parents, beginning teacher colleagues, and administrators (Arends & Rigazio-DiGilio, 2000). These comprehensive teacher induction supports have the potential to not only retain teachers but also help them become truly highly effective in all aspects of their career. Comprehensive teacher induction programs could greatly improve beginning teachers' ability to prepare for, navigate through, and survive the stress of their

first year of teaching (American Association of State Colleges and Universities [AASCU], 2006).

Implications for the State of Colorado

Within the state of Colorado, teacher retention has risen to the top as an area of great need (Reichardt, 2003; Zubrzycki, 2015). More teachers left their teaching career in the state of Colorado in 2014 than in the last 15 years (Zubrzycki, 2015). The national goal of NCLB is to provide an education to all students that is equitable; to achieve this goal, states must focus on developing the teacher workforce as well as retaining the workforce (Haynes, Maddock, & Goldrick, 2014). The majority of states fell into the 5 to 6% range for teacher turnover rate (Haynes et al., 2014). However, Colorado ranked second behind Hawaii for the highest percentage of teacher turnover with a 17% turnover rate. The rate of teacher turnover in the state of Colorado is impacting achievement and stability within schools and districts as indicated by the Colorado Growth Model (Colorado Department of Education, 2013), although no longer available.

In 2003, Mid-continent Research for Education and Learning (McREL) found for every five teachers in the state of Colorado, one left the school in which he/she was teaching at the end of the year and for every 10 teachers, one left teaching completely (Reichardt, 2003). In 2000, the state of Colorado hired 42,000 teachers and in 2014, the state hired close to 51,000 (Zubrzycki, 2015). In 2001, Colorado hired almost 7,000 teachers--50% were trained in other states and 40% were trained within the state and completed an alternative licensure program; 44% of these beginning teachers had no teaching experience (Reichardt, 2003). Although student populations have increased in the state, the number of teachers has increased at a much higher rate (Reichardt, 2003;

Zubrzycki, 2015). In addition, teacher attrition in the state of Colorado was highest for teachers under the age of 25, followed closely by teachers in the 26-31 age range (Reichardt, 2003).

Educational leaders in the state of Colorado are faced with a growing problem of hiring qualified and effective teachers as well as providing adequate support and professional development to retain these teachers for more than five years. There are distinct connections between the level of teacher experience and the level of student achievement (Reichardt, 2003). In the elementary grades, Reichardt (2003) found the majority of teachers were certified according to Colorado licensure standards. Although the majority of teachers were certified, the majority of these elementary teachers had less than three years' experience, which greatly impacted their effectiveness (Reichardt, 2003).

In the state of Colorado, funding is available to school districts through Title II, Part A of the Elementary and Secondary Education Act (Colorado Department of Education, 2011). Funding is available to districts for the improvement of teaching and leadership; teacher recruitment and teacher retention activities are included in this funding. The Colorado Department of Education (CDE; 2011) has encouraged districts to allocate funds to these areas as an effective means of improving the quality of educators in the state. In 2011, the CDE participated in an evaluation conducted by an external evaluator (OMNI Institute). Overall, funding for teacher recruitment and teacher retention increased by 4% from 2003-2004 to 2008-2009, which equates to approximately $2,034,000 to be divided among districts within the state (Colorado Department of Education, 2011). The number of districts requesting funds increased as

well--from 26 districts in 2003-2004 to 42 districts in 2008-2009. The dollar amount spent on teacher induction and support for beginning teachers was 63.5% of the Title IIA budget (Colorado Department of Education, 2011). However, the percentage of expenditures for teacher induction within the state of Colorado is misleading. Just because a school district offers beginning teacher induction there is no guarantee as to the quality.

One district did not use any of its Title IIA funding specifically for teacher induction (L. Brady, Director of Curriculum, Garfield RE-2 School District, Personal communication, July 30, 2013). The Title IIA funds were used to supplement academic coach salaries with the intent of supporting new teachers. The funds used for teacher induction were taken out of the general curriculum budget and totaled approximately $15,700 per year. Ten thousand dollars was used to pay mentor stipends and the remaining funds were used for supplies, professional development books, and meals for mentors and beginning teachers. The curriculum director for Garfield RE-2 School District communicated that the majority of the teacher induction components provided in the past within said district were provided through the Mountain Board of Cooperative Educational Services (Mountain BOCES; L. Brady, Director of Curriculum, Garfield RE-2 School District, Personal communication, July 30, 2013). However, if Mountain BOCES is unable to provide the services on-site at the district, then the district will have to come up with the $125 per beginning teacher to participate.

The dilemma the nation and the state of Colorado are faced with is dire (Ronfeldt, Loeb, & Wyckoff, 2012). Beginning teachers are leaving schools in droves and seriously impacting the achievement of each and every student in classrooms across the country

(Ingersoll & Smith, 2003). The need for comprehensive teacher induction is at an all-time high. School leaders are expected to ensure that students meet and exceed the standards set within any particular state with a highly qualified teacher in each classroom (Carroll & Foster, 2010). The issue is not about fixing a problem but the desire to build a teacher, a teaching force, and a profession worthy of the students of our great nation (Britton, Paine, Pimm, & Raizen, 2003).

Statement of the Problem

Teacher induction policies are developed with the intent to meet the needs of new teachers and school districts with whom they are employed (Goldrick, Osta, Barlin, & Burn, 2012). Teacher induction is to provide support for new teachers as they begin their career in education (Glazerman, Senesky, Seftor, & Johnson, 2006). School districts with high turnover rates who implement comprehensive teacher induction can reduce these turnover rates (Wechsler, Caspary, Humphrey, & Matsko, 2010). State legislatures use statutes for teacher induction to address NCLB requirements and the success of the students in their state (Youngs, 2007). Although the state of Colorado and school districts within Colorado might be aware of the potential comprehensive induction provides for their new teachers, there is no consistency across the state from district to district and sometimes even from school to school with regard to teacher induction and its implementation (R. Ley, Director of Teacher Induction Programs for Mountain BOCES, Personal communication, March 15, 2015). Due to these inconsistencies, very few, if any, inductees are being served adequately or even in the spirit of the statute. Therefore, Colorado's State Statute §22-60.5-204 (2005) regarding teacher induction within the state

needs deep revisions to provide comprehensive teacher induction that meets the need of the state's new teachers, school districts, and, ultimately, the students of Colorado.

Teacher turnover and inadequate teacher preparation have led the United States and the state of Colorado to recognize the need for more comprehensive teacher induction (Ingersoll & Strong, 2011). In the initial writing of the statute, the state of Colorado (Colorado Department of Education, 2012) covered the basics and left the details up to school districts. Colorado is a local control state, i.e., most of the public education decisions are made by school district administrations and their school boards (Colorado Department of Education, 2012). Revision of the statute should consist of adding the elements stated earlier for the implementation of comprehensive induction across the state and in all districts. Colorado's local control status might well cause a roadblock to the revision of this statute.

School districts in the state of Colorado have many options in developing teacher induction within their district and schools. Districts can write a request for a waiver stating that implementation of teacher induction would be a burden on the district and they could be exempted from providing support in the form of teacher induction to their beginning teachers. Most districts in the state look to implement some form of teacher induction as a way to improve student achievement as well as retain good teachers in their schools (Basile, 2006). The greatest hurdle districts face is the lack of funding and resources to create and sustain teacher induction (Basile, 2006). In addition, because multitudes of regulatory demands compete for funds, teacher induction continues to be uneven and inconsistent across the state of Colorado (Basile, 2006).

Research in the area of comprehensive teacher induction has focused on the components necessary to beginning teacher success. The focus needs to shift from the components to the affects teacher induction is having, if any, on the quality of teacher, the retention of teachers, and the quality of student learning (AASCU, 2006). Researchers have begun to change their definition of the teacher shortage away from the problem of insufficient supply to the problem of teacher retention. Strong (2009) contended that demonstrating increased retention rates does not give enough information about the quality of teaching practices or the potential learning of students. Research needs to be conducted to link teacher induction to student growth scores for achievement.

Assumptions

The assumptions I am operating under are directly related to my experiences as a researcher, educator, and doctoral student:

1. The school districts will share their induction practices honestly.
2. Comprehensive teacher induction positively impacts beginning teacher success (Ingersoll, 2012).
3. Comprehensive teacher induction positively impacts beginning teacher retention (Glazerman et al., 2006).
4. The school districts know what components of comprehensive teacher induction are currently being provided.

Definition of Terms

Adjustment of working conditions. Can include, but is not limited to, reduction in class size, reduction in the number of courses a beginning teacher is responsible for, and increased planning time for beginning teachers.

Attrition. The departure of teachers from their current teaching jobs, which includes new teachers moving from one school or district to another, movers, and new teachers who exit the teaching profession--leavers (Schlechty & Vance, 1981).

Beginning teacher. A teacher who is new to the profession and has taught for five or less years.

Beginning teacher induction. A purposeful program with the intent of providing systematic and sustained assistance to beginning teachers for at least one year.

Collegial collaboration. Collaboration among and with other teachers, both beginning and veteran, which encourages teamwork and a learning community.

Follow-up. Support provided to teachers in their second and/or third years as needed.

Mentor. A veteran teacher who has been partnered with a beginning teacher to provide systematic and sustained assistance.

Mentor evaluation. Assessment of beginning teachers that is formative in nature and does not contain an evaluative component conducted by the mentor teacher.

Mentor program evaluation. An internal audit of the program conducted at least every other year to determine effectiveness.

Mentor training. Training for mentors that includes an understanding of adult development and learning, supervision, relationship building, and communication skills.

Orientation. A teacher induction component that introduces new teachers to the district, its mission, vision, and goals as well as the main facets of the school where they will be teaching.

Professional development. Opportunities designed around real-time experiences and problems a sustained through collaboration and reflection over time.

Program evaluation. Evaluation of the induction program that includes any and all participants or stakeholders. The evaluation should focus on the satisfaction of the participants, the usefulness of the program, as well as the attainment of intended goals.

Program scope. A scope and sequence for mentors to follow in giving support to beginning teachers.

Release time. Time during the contracted school day when beginning teachers are given the opportunity to take part in induction events including but not limited to observation of mentors and peers, team planning, collaborative problem solving, and reflection.

Retention. The retaining of teachers in their current jobs within their current district for a period of more than five years (Boe, Cook, & Sunderland, 2008).

Selection and assignment. District or BOCES determined guidelines for mentors including but not limited to years of experience, years in the district, and desire and willingness to serve as a mentor.

CHAPTER II

LITERATURE REVIEW

A review of the literature supported the effectiveness of comprehensive teacher induction programs to retain beginning teachers and allow them to experience more success while developing effectiveness in their instruction and the classroom. Starting with research regarding beginning teacher retention, the review of the literature demonstrated a weakness in teacher induction that increases as the complexities of the job increase. Current practices in teacher induction include a variety of methods for preparing and supporting teachers including but not limited to mentoring, observations, and coaching. However, the literature review revealed these methods in isolation have not been effective in increasing beginning teacher retention. Finally, two comprehensive teacher induction programs, the methods within those programs, and the success rates in beginning teacher retention were examined. These two programs were chosen because they have research regarding their success as well as being from two areas very different from the state of Colorado.

Beginning Teacher Retention

Beginning teachers enter the profession with lofty expectations involving both their students and their own performance (Bartell, 2005). The beginning years in the teaching profession can be the most challenging and defining for a teacher. Early experiences of beginning teachers determine patterns of instruction and practices that

remain with the teacher throughout their career. Teacher retention research has shown the first three years of a beginning teacher's career are the most perilous and the years when teachers are the most likely to leave (Bartell, 2005). These years are the riskiest because careful support and purposeful development of expertise in teaching have not been addressed adequately.

Beginning teachers enter the educational workforce with minimal structured processes for induction and initiation compared to other occupations (Ingersoll & Smith, 2004). Teaching involves constant and concentrated interactions with students; however, the majority of this is done individually without support from colleagues. Beginning teachers are left to their own devices and to "sink or swim" in their career (Ingersoll & Smith, 2004). Due to this lack of support, multitudes of beginning teachers enter the profession with high expectations and leave it after but a few years discouraged, defeated, and determined to work in a different field (Ingersoll, 2012). Many teachers leave the profession before they have spent the time required to become highly effective (Haberman, 2007; Smith & Ingersoll, 2004). According to multiple researchers, the data imply that after just five years in the teaching profession, between 40% and 50% of all beginning teachers will have left the profession (Bolich, 2001; Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2008; Ingersoll & Smith, 2003; Marvel, Lyter, Peltola, Strizek, & Morton, 2006).

Who is Leaving?

In recent years, the failure to ensure that all elementary and secondary classrooms have a highly qualified and effective teacher has gained nationwide attention (Ingersoll, 2002). However, it is not an overall teacher shortage that is being faced. There are

shortages within the teaching profession, especially in special education and other specialized fields within education. Many assumed the shortage of highly qualified and effective teachers was due to retirement rates; however, the "larger part of the problem is teacher attrition—which is particularly high among teachers in their first years of service" (Ingersoll & Smith, 2004, p. 31). In low-income schools, teachers are particularly hard to find and keep (Ingersoll, 2002). Teaching as an occupation accounts for 4% of the workforce in America (Ingersoll, 2002). In addition, the turnover rate among teachers is greater than in any other occupation (Ingersoll, 2002).

Unfortunately, not only those who have proven themselves to be ineffective are leaving (Schlechty & Vance, 1981). Of those who leave teaching, several researchers concluded it is often the most idealistic, the best, and the brightest who give up the soonest, leaving those "detached job-holders who feel neither responsible nor accountable for students' behavior, learning or anything else" (Haberman, 2007, p. 153) and whose "only goal is to do the minimum required to remain employed" (Schlechty & Vance, 1981, p. 112). Indeed, those beginning teachers who have entered the profession burning with the desire to make a difference to teach every child often suffer through the first year or two feeling ineffective, overwhelmed, and disappointed in their inability to juggle the multiple red-tape responsibilities thrown at them, impossible planning expectations, miserable working conditions, and minimal support, all while experiencing little of the joy they were expecting (Schlechty & Vance, 1981).

Why Are They Leaving?

Haberman (2007) cited high stress as a major reason for teacher attrition. "Student achievement may be the most stressful of the novice teacher's challenges. The

practical application of No Child Left Behind, NCLB, has resulted in linking a teacher's worth to the achievement scores of his assigned students" (Weaver Shearn, 2007, p. 3). There are multiple causes of stress but common themes. Often teachers are hired in late summer. They are given numerous classes to prepare, minimal supplies, the toughest students, low wages, and minimal support. There is no gradual release from being a student of teaching to being a full-time teacher of students. Beginning teachers are given full teaching loads usually comprised of the class and/or courses experienced teachers want to avoid (Ingersoll, 2003). "Unlike other professions in which responsibility increases with experience, the teaching profession gives full responsibility for a class of students to each teacher, new or veteran" (Weaver Shearn, 2007, p. 3). The granting of full responsibility from the beginning often causes new, least prepared teachers to learn their practice while working with even more difficult teaching assignments than their experienced peers (Haberman, 2007). In fact, "critics have long assailed teaching as an occupation that 'cannibalizes its young' and in which the initiation of new teachers is akin to a 'sink or swim,' 'trial by fire,' or 'boot camp' experience" (Smith & Ingersoll, 2004, p. 682). Teaching is a high-stress job, even for the most experienced teacher.

According to a national questionnaire given to teachers who left after their first year of teaching, approximately half of new teachers did so for reasons beyond their control; however, the other half either left to "pursue a better job or another career" or because of their "dissatisfaction with teaching as a career or with their specific job" (Ingersoll & Smith, 2004, p. 682). Of those who were dissatisfied, when asked by Ingersoll and Smith (2004) to list up to three reasons, their answers reflected the following:

> More than three-fourths linked their quitting to low salaries. But even more of them indicated that one of four different school working conditions was behind their decision to quit; student discipline problems; lack of support from the school administration; poor student motivation; and lack of teacher influence over school wide and classroom decision making. (p. 32)

Importance of Teacher Retention

By definition, teacher retention is the retaining of teachers in their current jobs within their current district for a period of more than five years (Boe et al., 2008). The retention of highly qualified elementary and secondary classroom teachers has gained nationwide attention due to the No Child Left Behind Act of 2001 (Ingersoll, 2001). Consensus is growing around the notion that teachers are the greatest determinant of student success and achievement (Barnett, 2004). Linda Darling-Hammond (2010) found when teachers are well-prepared and have gained expert experience, they can have tremendous influence over student achievement. Teacher retention has far reaching impacts including but not limited to student achievement, instruction, organization, and fiscal impacts.

Student Achievement Impacts

Students who have access to a certified teacher with more than two years of experience have a greater tendency toward academic success when compared with students who had an inexperienced teacher, whether they were certified or not (Darling-Hammond, 2010). High turnover brings about many challenges for students and districts such as lack of continuity for students in their instruction (Darling-Hammond & Sykes, 2003). Student learning and achievement gains are more greatly influenced by the assignment to a highly effective teacher's classroom than by class size and class

demographics (Darling-Hammond & Youngs, 2002; Ronfeldt et al., 2012). When students are taught by a continuous series of new teachers, their achievement declines.

Research conducted in New York City schools focusing on fourth and fifth grade classrooms found performance levels of students were worse when turnover occurred than when the students experienced continuity in effective teaching--defined as a person who has positive expectations for student success, excels at classroom management, and designs lessons for mastery (Ronfeldt et al., 2012; Wong, 2009). Math scores within these grades were 8.2% to 10.2% of a standard deviation lower for students experiencing teacher turnover. In addition, an analysis of data gathered for school-by-grade level and grade-by-school level confirmed the previous results, indicating turnover did indeed affect student achievement (Ronfeldt et al., 2012).

Instructional Impacts

High turnover of staff also impacts implementation of instructional programs with coherence and success (Boyd et al., 2008; Ronfeldt et al., 2012). Implementation of instructional programs is impacted by new teachers repeating mistakes when initially implementing a program rather than improving the implementation (Boyd et al., 2008; Ronfeldt et al., 2012). The experience level of the teaching force, therefore, impacts instruction, reduces student learning, and reduces student achievement (Boyd et al., 2008; Glazerman et al., 2006).

Organizational Impacts

High turnover rates have organizational implications. With high turnover, schools and districts face a continuous loss of organizational knowledge, causing an endless cycle of starting over with programmatic agendas rather than making progress toward goals

(Basile, 2006; Boyd et al., 2008; Glazerman et al., 2006; Ronfeldt et al., 2012). Ronfeldt et al. (2012) connected the cohesion of the community and staff as impacts to the organization or school, and, ultimately, student achievement.

The National Commission on Teaching and America's Future found the most important influence on what students learn is what teachers know and can do (Finn, 2003). Retention of beginning teachers is closely related to their first teaching experience; there is a correlation between retention of beginning teachers and the level of training and support they receive (Ingersoll & Smith, 2003). Therefore, we need to view our beginning teachers as "an enviable resource of intellectual capability, able to significantly help to transform education and to meet unforeseen challenges" (Tickle, 2000, p. 38).

Fiscal Impacts

Investment in teacher retention can reduce teacher turnover and costs connected to turnover (Barnes, Crow, & Schaefer, 2007). Costs associated with teacher turnover are real and are counted not only in terms of dollars but also in student achievement and the ecology of a workplace (Huling, 2006a). Teacher turnover costs negatively impact districts with scarce resources (Barnes et al., 2007). Funds used to cover the turnover of teachers could be better spent investing in improving teacher effectiveness and student growth (Barnes et al., 2007). Investment in teacher retention through induction is necessary to protect the asset of a beginning teacher for a district (Huling, 2006a).

Levy, Joy, Ellis, Jablonski, and Karelitz (2012) conducted research in Boston's public schools centered on the hidden fiscal costs of teacher turnover. The researchers found there are many hidden, unmeasured costs when a teacher leaves a school or district

(Levy et al., 2012). Their research indicated the estimated cost for beginning teacher support was $4,973 per teacher. In addition, the beginning teachers received $2,914 in professional development throughout the year. Therefore, the reported total cost in Boston to replace a beginning teacher, not including human resource departmental work, was $7,887 (Levy et al., 2012). An additional finding of the research revealed the schools experiencing low retention rates spent more on recruitment and hiring of beginning teachers while the schools with high retention rates spent more on support for beginning teachers (Levy et al., 2012). During the 2004-2005 school year, a study was conducted in southeast Florida in an attempt to determine attrition costs and retention savings (Watlington, Shockley, Guglielmino, & Felsher, 2010). The researchers discovered one county had a very high attrition rate with a low cost tied to this attrition while the other county had a low attrition rate and a high cost tied to the teacher turnover (Watlington et al., 2010).

Teacher induction programs, therefore, can stand as a crucial point in a beginning teacher's career and serve to enable learning, growth, and support (Britton et al., 2003). Beginning teachers who participated in teacher induction programs were found to be more successful in the classroom due to their ability to understand state standards, implement challenging instruction, and successfully motivate their students. Finally, teacher induction programs bring together four key educational communities--those at the district-level, the classroom-level, teacher education practice, and higher education practice (Wang, Odell, & Clift, 2010).

What is Teacher Induction?

Teacher induction can be viewed as the "mortar that cements pre-service training to continue in-serviced professional development" (Reinhartz, 1989, p. 4). Teacher induction is a purposeful program intended to "provide systematic and sustained assistance to beginning teachers for at least one school year" (Huling-Austin, 1990, p. 536). The first year in the teaching profession is a make-or-break year for 50% of beginning teachers. The experiences beginning teachers have during this first year are critical in determining whether they will remain in the profession as well as determining the caliber of teacher they will become (Shulman & Colbert, 1987). Teacher induction programs and mentoring programs are often referred to with the same definition; however, in the context of this review, teacher induction encompasses all support activities a beginning teacher might encounter including mentoring (Huling, 2006a).

Wood and Waarich-Fishman (2006) defined teacher induction as a time in a beginning teacher's development containing both elements of survival and discovery. Teacher induction is a doorway into the teaching profession, which has the capacity to build and form distinct teaching practices that remain for the rest of a beginning teacher's career--whether these practices are positive or negative (Wood & Waarich-Fishman, 2006). According to Britton et al. (2003), teacher induction is a "process for learning; a particular period of time; a specific phase in teaching and a system" (p. 3). In addition, teacher induction is a progression of socialization for beginning teachers in their school culture (Feiman-Nemser, 2010). As a program, teacher induction has a variety of goals it seeks to accomplish. These goals include

> a) to improve teacher performance; b) to increase the retention of promising beginning teachers during the teacher induction years; c) to promote the

> personal and professional well-being of beginning teachers by improving teachers' attitudes toward themselves and the profession; d) to satisfy mandated requirements related to teacher induction and certification; and to e) transmit the culture of the system to beginning teachers. (Huling-Austin, 1990, p. 539)

Teacher induction--its goals and intentions--is important for all beginning teachers to experience.

According to DePaul (2000), "The U.S. Department of Education has a keen interest in the issues of teacher induction, quality, and retention and is taking steps to improve the American teacher force" (p. 3). With the advent of No Child Left Behind (NCLB), the stakes have been raised, accountability has become a household word, and beginning teachers are floundering even more (Desimone, 2013). Beginning teachers are more likely to be placed in difficult school settings where staffing issues are a continual problem, school cultures are problematic, and support is almost non-existent (Ingersoll & Smith, 2004). To recruit and retain teachers in these schools and endeavor to meet NCLB mandates, educators need to look at what is required to ensure every student has a highly qualified teacher (Darling-Hammond, 2010). There is evidence that new teacher induction, along with incentives and recruitment pathways, can ensure each student has the teacher he/she deserves (Barnett, Hopkins-Thompson, & Hoke, 2002).

In 1984, eight states were providing new teacher induction (Furtwengler, 1995), although the content and delivery were not clear and consistent. By 1991, 31 states were providing some form of new teacher induction (Furtwengler, 1995). The 1990s saw a rise in pilot programs in many states across the nation. These pilot programs were varied and were experimenting with countless forms of delivery as well as content. Funding for these programs was provided by some states (Finn, 2006). By 2008, 90% of beginning

teachers were participating in some form of teacher induction--up from 40% in 1990-1991 (Finn, 2006; Haynes et al., 2014; Smith & Ingersoll, 2004). In 2008, 25 states required and provided funding for all beginning teachers to receive mentoring--a component of induction. In addition, 20 of those states had standards in place for the selection, training, and matching of mentors with beginning teachers (Klemick, 2008).

The extensive disparities in implementation gave cause to the acute need for educational researchers to shift their focus away from whether teacher induction is effective to investigating how teacher induction concentrates on the associations between the development of effective teachers, retention of teachers, and student achievement (Ashdown, Hummel-Rossi, & Tobias, 2006). Across the nation, society as a whole has become extremely mobile (Ingersoll, 2003). It is not uncommon for people to move across the country or to other states several times within their career. As part of this attrition problem, beginning teachers are sometimes transferring from one school to another or even one district to another in an attempt to find a place where they will be supported and can develop into effective teachers (Smith & Ingersoll, 2004). When looked at from the teacher induction context, mobility hinders the success of beginning teachers because there is a lack of standards from state to state or district to district. Therefore, the beginning teacher might find him/herself participating in a multitude of programs or no teacher induction at all (Smith & Ingersoll, 2004).

Features of Induction Programs

Induction is multifaceted and varies in complexity from one identified strategy to multiple strategies, intending to provide the necessary professional development beginning teachers need. Horn, Sterling, and Subhan (2002) proposed induction that

contains nine common features: orientation, mentoring, adjustment of working conditions, release time, professional development, opportunities for collegial collaboration, beginning teacher assessment, program evaluation, and follow up. The systems contained in induction take into consideration supporting beginning teachers but also go beyond this assistance to include requirements of the general education systems of which the beginning teachers are a part (Britton et al., 2003).

Orientation

Orientation occurs in most districts in some form for beginning teachers, although the length and structure may vary. The intent of orientation is to introduce new teachers to the district, its mission, vision, and goals, as well as the main facets of the school in which they will be teaching (Heidkamp & Shapiro, 1999). Orientation typically occurs before the school year begins, ranges in length from a half day to one full week, and focuses on familiarizing beginning teachers with the district and school through paperwork, procedures, and socialization into the school culture and community (Arends & Rigazio-DiGilio, 2000).

Mentoring

The most common element found in induction is mentoring (Feiman-Nemser, Schwille, Carver, & Yusko, 1999). In the context of induction, a mentor is a veteran teacher who has been partnered with a beginning teacher to provide "systematic and sustained assistance" (Strong & Baron, 2004, p. 48). Several critical elements in a successful mentoring program include a program scope, training, careful selection of mentors and thoughtful matching with beginning teachers, and the evaluation of the program (Bolich, 2001; Dagenais, n.d.; Feiman-Nemser et al., 1999). The intent of a

mentoring relationship is to provide assistance to the beginning teacher in transitioning from a student teacher to a teacher, guidance in state standards and district curriculum expectations, as well as supporting reflective teaching practices (Danielson, 2002; Smith & Ingersoll, 2004).

Mentors should have a solid understanding of adult development and learning, supervision, relationship building, and communication skills (Arends & Rigazio-DiGilio, 2000). Training in these areas can result in greater effectiveness within the mentor/mentee relationship (Arends & Rigazio-DiGilio, 2000). Mentors help beginning teachers learn to effectively instruct and work with students, communicate with parents, collaborate with fellow educators, and understand the demands and expectations of school leadership and how to respond to them (Bartell, 2005). Mentors provide guidance for beginning teachers as they process problems encountered in their classroom and the profession as a whole. The mentor strives to help beginning teachers remain focused on student learning and provide guidance toward more effective practices (Bartell, 2005). Mentoring can aid in shaping teaching practices and help teachers become competent and successful in the beginning teacher's early careers (Bartell, 2005).

Adjustment of Working Conditions

Beginning teachers' work schedules are often not conducive to completing induction activities. The adjustment of working conditions relates not only to reducing the number of courses for which a beginning teacher is responsible but also managing the difficulty of the student population to which a beginning teacher is accountable (Brooks, 2005). In addition, decreased class sizes, fewer class periods to prepare lesson plans for, and increased planning time address the adjustment of working conditions (Horn et al.,

2002; Selzer, 2000). Leadership at the district and school level must strive to provide time on a regular basis that is structured for beginning teachers to complete induction activities (Fallon, 2004).

Release Time

Release time serves many purposes. For beginning teachers, release time offers the opportunity to take part in induction events that potentially occur during a regular, contracted school day (Arends & Rigazio-DiGilio, 2000; Feiman-Nemser et al., 1999). These activities include but are not limited to observation of mentors and peers, team planning, collaborative problem solving, and reflection (Arends & Rigazio-DiGilio, 2000; Feiman-Nemser et al., 1999). Another facet to the release time component is providing mentors themselves with time away from their responsibilities. During this time, mentors can model lessons for the beginning teacher, observe the beginning teacher teaching, plan lessons with the beginning teacher, and ultimately provide quality feedback to help the beginning teacher become more effective (Horn et al., 2002).

Release time can be focused on other activities including observation of teachers, both of the beginning teacher and by the beginning teacher, which includes feedback in order to foster professional growth. Beginning teachers should observe teachers from a multitude of categories including but not limited to other new teachers, their mentors or other mentor teachers, teachers in the same subject area, and teachers from other grades and subjects or with particular expertise from which the beginning teacher could benefit (Barnett et al., 2002; Britton, Raizen, Paine, & Huntley, 2000). These observations serve many purposes. Observing a mentor solidifies the advice the beginning teacher is being provided by the mentor while observing teachers in the same content area increases

beginning teachers' knowledge of teaching practices and material within the standards. Observing other teachers provides the opportunity to focus on classroom management strategies and not specific content (Britton et al., 2000).

Professional Development

Professional development opportunities linked to a beginning teacher's teaching-learning process are necessary. These opportunities should be designed around real-life experiences and problems and sustained through collaboration and reflection over time (Feiman-Nemser et al., 1999). The intent of professional development is to build a firm foundation for beginning teachers in the role of the profession and to advance the knowledge, skills, and attitudes necessary for the career on which they are embarking (Darling-Hammond, Berry, Haselkorn, & Fideler, 1999). Distinct features of professional development mentioned by Wilson and Berne (1999) are those that promote professionalism, collegiality with others, as well as experimentation.

Professionalism development is a broad concept in induction and can be open to interpretation by districts and schools. Some common pieces of professional development can be mini-courses centering on instruction; classroom management and discipline; relationships with families, the community, the school administrator, and peers; the reality of the teaching career; and feelings of isolation (Fallon, 2004). Other forms of professional development include but are not limited to teacher networks, study groups, and teacher inquiry (Darling-Hammond & Loewenberg Ball, 1999).

Opportunities for Collegial Collaboration

The National Commission on Teaching and America's Future (Fallon, 2004) found collegial collaboration can aide in helping beginning teachers combat feelings of

isolation and contributes to building an environment where teaching is both cooperative and collaborative. Wong (2004) asserted these collegial conversations must become the norm for beginning teachers because working together helps beginning teachers learn to problem solve and can ultimately lead to a higher level of potential (Brooks, 2005). Collegial collaboration encourages teamwork and a learning community of beginners and veterans (Wong, 2004). Veteran teachers sharing their personal experiences regarding how they responded to actual classroom concerns can help individualize the support for beginning teachers (Brown, 2003). Haynes et al. (2014) discovered beginning teachers are highly influenced to alter their instructional practices by learning from their peers.

In addition to collegial collaboration within the school, peer support groups are tremendously critical for beginning teachers to realize it is not just them--they are not alone in their experiences (Britton et al., 2000). These peer support groups can be within a district or within a computer network designed to support beginning teachers. The support groups can be general or focused on specific topics with which beginning teachers need support (Britton et al., 2003; Horn et al., 2002). The greatest contribution the support groups offer is the understanding that every teacher, beginner or veteran, has experienced the same difficulties at some point in their career (Britton et al., 2000; Brooks, 2005).

Assessment of Beginning Teachers

The assessment of beginning teachers is formative in nature and should be tied to teacher standards with the intent of fulfilling teacher licensure requirements (Darling-Hammond & Loewenberg Ball, 1999). When a beginning teacher is observed, one of the most valuable aspects a mentor or building leader can provide is constructive feedback.

This feedback helps the beginning teacher develop and his/her skills and progress toward a successful summative assessment (Brooks, 2005; Darling-Hammond et al., 1999; Yopp & Young, 1999). Although a mentor is responsible for observing and providing feedback to a beginning teacher, the actual evaluative component should be removed (Brooks, 2005). The summative evaluation is all-inclusive while the formative assessments as provided by a mentor are ongoing. Researchers determined that beginning teacher induction loses its effectiveness when a mentor is in an evaluative role (Brooks, 2005).

Program Evaluation

To monitor effectiveness, induction programs need an ongoing, comprehensive system for evaluating the program. The system should include any and all participants and stakeholders within or involved in the induction program (Britton et al., 2000). A piece of this evaluation should include the cost-effectiveness of the program and its components (Britton et al., 2000). The evaluation of an induction program should focus on the satisfaction of the participants and the usefulness of the program but should also include the attainment of intended goals including student achievement gains, greater retention of beginning teachers, and a greater sense of morale within the schools (Arends & Rigazio-DiGilio, 2000).

Follow-up

Follow-up is the forgotten component of induction. Feiman-Nemser et al. (1999) maintained, "When induction is narrowly defined as short-term support to help teachers survive their first year on the job, its role in fostering quality teaching and learning is diminished" (p. 3). Beginning teachers are certainly not experts after only one year; the majority of beginning teachers will need support into their second and possibly third

years (Horn et al., 2002). The needs of second and third year teachers are different than beginning first year teachers; therefore, the induction in these years should be individually tailored (Horn et al., 2002).

Teacher Induction and Policy in the Nation

Teacher induction as a prescriptive means of enabling beginning teachers to develop has been a concern at the national level but has not been mandated nor funded. States have taken the charge to mandate and occasionally fund teacher induction programs (Bartell, 2005). The majority of states are now requiring beginning teacher participation in induction programs and professional development opportunities to attain teaching credentials (Bartell, 2005). These programs vary from state to state, district to district, and even school to school. Regardless of where an induction program is initiated, either at the state or local level, implementation of induction is determined at the local level (Bartell, 2005). Individual states set policies determining what types of support beginning teachers are provided (Pultorak & Lange, 2010). However, although the purpose of local programs might be aligned with state purposes, the programs might differ in focus and emphasis (Bartell, 2005). Goals and intentions of induction programs need to be well-defined for local governing agencies, leaders within the schools, and all participants in the program (Bartell, 2005). Once implemented, the majority of these teacher induction policies are underfunded, leaving the burden on districts to determine if teacher induction matters enough for them to fund it. Only 16 out of the 28 states with mandated teacher induction policies are provided with funding from the state (Carver & Feiman-Nemser, 2009).

However, great inconsistencies exist between states concerning teacher induction programs, what is offered within the programs, and the extent of available funding (Finn, 2006). Goldrick et al. (2012) found tremendous discrepancies among states and their induction policies; 28 states required some form of induction or mentoring for beginning teachers and 22 states required completion or participation in an induction program to receive professional teaching certification. In addition, 16 states provided some funding for teacher induction. The most disturbing finding was only three states (Connecticut, Delaware, and Iowa) required multi-year induction, required completion of a professional teaching license, and funded comprehensive induction programs (Goldrick et al., 2012). In some cases, beginning teachers were afforded the opportunity to work with a mentor teacher, were exposed to a collaborative culture with their colleagues and took part in orientation as well as professional development options throughout the school year, while others were given minimal induction support (Smith & Ingersoll, 2004). Additionally, teacher induction and the mentoring component of teacher induction were inconsistently implemented at best and were typically the first program to be eliminated when budget cuts were needed within districts (Darling-Hammond et al., 1999).

Colorado's Induction and Policy

In the state of Colorado, fulfillment of an approved teacher induction program is necessary to be recommended to receive a professional teacher license. Congressional interest in induction has grown due in part to the No Child Left Behind Act of 2001 (2002) and emphasis on teacher quality within the Act. The state of Colorado leaves the majority of decisions regarding teacher induction up to local districts.

Policy Language

The New Teacher Center (Goldrick et al., 2012) conducted a review of all 50 states' induction policies related to 10 criteria essential to comprehensive induction: (a) teachers served, (b) administrators served, (c) program standards, (d) mentor selection, (e) mentor training, (f) mentor assignment and caseload, (g) program delivery, (h) funding, (i) educator accountability, and (j) program accountability (Goldrick et al., 2012). In the areas of teacher served, state policy requires all beginning teachers receive at least two years of induction support. Colorado's policy does not require a minimum number of years for participation in an induction program (Colorado Department of Education, 2015). School districts within the state are at liberty to determine the length of the program. The second key area, administrators served, requires administrators receive at least two years of induction (Goldrick et al., 2012). The policy language for Colorado mandates participation in an induction process but it sets no time requirement (Colorado Department of Education, 2015). Program standards should be formal and manage the operation of the teacher induction programs at the local level (Goldrick et al., 2012). Colorado does not have a comprehensive teacher induction program; however, the state has outlined minimum requirements and suggested guidelines for programs.

The state has set guidelines regarding the selection, training, and release time afforded to mentor teachers (Colorado Department of Education, 2015). The state also requires an assessment to review, evaluate, and guide an induction program. Standards for selecting a mentor for a beginning teacher have been recommended as well as language around the primary role of a mentor. Finally, Colorado included language to help determine if the mentor is to be part of the beginning teacher's evaluation (Colorado

Department of Education, 2015). The fourth area requires rigorous mentor selection (Goldrick et al., 2012). Colorado's policy leaves the establishment of these standards up to individual districts with a few guidelines; the person being considered as a mentor must (a) agree to be a mentor, (b) be an experienced professional who exhibits excellence in their practice, (c) work well with others, (d) present him/herself as an active and open learner, and (e) be a good communicator with interpersonal as well as public relations skills (Colorado Department of Education, 2015). Mentor training policy requirements call for foundational training and professional development for chosen mentors. Colorado requires school districts to include this and to ensure a process for mentors and their training. Colorado statute does not set specific requirements; it is left to local control to design and provide this component. Mentor assignment and caseload is the sixth key area on which state policies are rated (Goldrick et al., 2012). State policy should include language describing how mentors are assigned, what their caseload is, and to encourage release time for mentors. Colorado state policy requires district establishment of mentor match-up guidelines but does not require the inclusion of release time. State policy gives suggestions for districts and program designers to consider regarding mentor assignments such as a match between teaching assignments between the beginning teacher and the mentor, proximity between the two participants, and no conflict between personality styles (Colorado Department of Education, 2015).

The seventh key component is program delivery (Goldrick et al., 2012). State policy must identify key program elements that include stated amount of mentor-beginning teacher contact time, some form of formative teaching assessment, and classroom observations. Colorado's policy does not require any of these components but

does encourage districts to include them in their programs (Colorado Department of Education, 2015). State policy includes general elements of professional development it deems important: providing beginning teachers with information related to school and district policies, district goals and standards, roles and responsibilities of an educator, school community information, substantial feedback to the beginning teacher regarding his/her performance, and for the district to include provisions for extension of an induction program if necessary for certain individuals (Colorado Department of Education, 2015). Funding for comprehensive teacher induction is also a key component the New Teacher Center (Goldrick et al., 2012) considers when evaluating state policies. The requirement is that states provide funding that supports local induction programs. The state of Colorado does not provide any type of funding for local induction programs specifically.

Finally, accountability both for educators and programs is a key component (Goldrick et al., 2012). Educator accountability requires states to include participation in an induction program to advance licensure within the state. Colorado requires all teachers hold an initial license to participate in an induction program in order to obtain a professional teaching license in the state (Colorado Department of Education, 2015). The beginning teacher and his/her initiation of a professional growth plan, which should incorporate a number of potential supports, drive the induction process. Mentors are to provide input into the growth plan and submit this to the state prior to license application. Program accountability requires states to assess and/or monitor programs for quality through accreditation, program evaluation, site visits, surveys, and reports from the districts or program directors (Goldrick et al., 2012). Colorado puts ownership of this

requirement onto local districts, requiring them to establish, review, evaluate, and guide the program. Self-evaluation surveys are completed every five years.

Policy Context

The past four years have brought colossal changes in education policies in the state of Colorado. The passage of the Educator Effectiveness Act brought with it a comprehensive revision of the state's position regarding the evaluation of the performance of principals, teachers, and other licensed education professionals (Colorado Department of Education, 2015). The intent of the law is for the state, districts, and schools to shift the evaluation processes to become more rigorous and supportive, thereby providing professional learning and improvement on a continuous basis (Colorado Department of Education, 2015).

The micro-political perspective of the implementation of the Educator Effectiveness Act is at the district and school level (Colorado Department of Education, 2015). Micro-political perspectives are rooted within individual schools and districts (Marshall & Gerstl-Pepin, 2005). Although the laws have been changed regarding evaluation in the state, the statute relating to teacher induction remains the same. The micro-political perspective regarding potential support necessary for beginning teachers as seen through a district lens can enhance the understanding of the connections between teacher induction and teacher retention with evaluation in the background.

Districts in the state of Colorado seek to improve student learning and retain good teachers through the implementation of induction programs. Unfortunately, induction programs and their results remain uneven across the state. The necessary resources to provide induction and regulatory demands on school districts compete for funding, which

is a contributing factor to induction (Basile, 2006). Educational leaders in the state of Colorado are faced with a growing problem of hiring qualified and effective teachers as well as providing adequate support and professional development to retain these persons for more than five years. There are distinct connections between the level of teacher experience and the level of student achievement (Reichardt, 2003). In the elementary grades, Reichardt (2003) found the majority of teachers were completely certified. The discrepancy with the data was that although the majority were certified, the majority of elementary teachers also had less than three years' experience (Reichardt, 2003). Although teachers were certified, no data were available to indicate the type of induction support they were provided to enhance their ability to affect student achievement.

Best Practices in Induction Programs

Induction program models vary in components included, intensity in implementation, and requirements for completion (Brooks, 2005). State policies as well as local perspectives influence induction program designs and implementations (Bartell, 2005). Many programs provide intermittent professional development workshops to provide new teachers with information typically provided during an orientation (Darling-Hammond et al., 1999). In any induction program the goals must be clear to all entities who have an investment (Bartell, 2005). Two programs were selected due to their success with regard to induction, teacher retention, and student achievement.

California's Beginning Teacher Support and Assessment

The Beginning Teacher Support and Assessment (BTSA; 2015) program was initiated in 1992 in response to Senate Bill 1442 with a focus on the retention of quality teachers. Through this bill, the goals of the BTSA program were designed to do the

following: provide effective transitions for beginning teachers into their professional roles and responsibilities as teachers; increase student achievement; increase their confidence; and raise their commitment to teaching careers, thereby increasing teacher retention (Horn et al., 2002; Mitchell, Scott, Hendrick, & Boyns, 1998; Villar & Strong, 2007). The Santa Cruz New Teacher Project (SCNTP) is the longest running iteration of the BTSA programs (Brooks, 2005; Moir, Gless, & Baron, 1999).

Initially, California's state government funded the program with $4 million with an increase to $85 million (Villar & Strong, 2007). An estimated per teacher cost to offer BTSA support was $6,605. The state provided $3,000 in funding and local districts budgeted for the difference in cost per teacher (Moir et al., 1999). The increase in support insured every beginning teacher entering the California school systems in 2004 and beyond would receive the support through the BTSA program (Villar & Strong, 2007).

The BTSA induction program components are clear, concise, and strive to encompass all beginning teachers might need for support including mentor support, observations for formative assessment that occur at least twice a year and are aligned with the California professional teaching standards, release time, and collegial collaboration (Brooks, 2005; Horn et al., 2002). Mentors receive 60 hours of training that include how to mentor and the use of state standards (Horn et al., 2002). Beginning teachers meet with other beginning teachers from across the district or several districts during monthly professional development seminars (Brooks, 2005). Beginning teachers' unique developmental needs are supported through the creation of an individual induction plan (IIP; Brooks, 2005; Horn et al., 2002; Mitchell et al., 1998).

Research gathered determined beginning teachers benefited from participation in BTSA with substantially improved skills (Mitchell et al., 1998), improved retention rates, an increase in job satisfaction, and the ability to address the needs of diverse student populations (Moir et al., 1999). Student achievement scores in literacy classrooms of beginning teachers who were participating in BTSA were comparable to those of veteran teachers (Brooks, 2005; Moir et al., 1999). In addition, the teacher retention rate increased from 63% to 91% in five years (Darling-Hammond et al., 1999). Some research detailed potential disconnects within the program's effectiveness. Darling-Hammond and Sykes (2003) reported a potential reduction in effectiveness as the program grew in size.

Connecticut's Beginning Educator Support and Training Model

The Beginning Educator Support and Training (BEST; 2007) system began its existence in Connecticut in 1986 in answer to Connecticut's Educational Enhancement Act (Brooks, 2005; Horn et al., 2002). The program is a mandated two years in length for every new teacher to the state of Connecticut (Brooks, 2005). The purpose and intent of the BEST induction program is to ensure beginning teachers receive training that will help them become highly qualified and competent; increase beginning teachers' knowledge of their subject matter and instruction strategies; enrich their comprehension of the students they are teaching; become knowledgeable in school, district, and state standards and goals; as well as begin a passion for lifelong learning and growth in their profession (Horn et al., 2002). The support for beginning teachers is provided by both the state and the district (Brooks, 2005; Youngs, 2002).

The BEST induction model includes orientation, mentoring, an adjustment of working conditions for beginning teachers and their mentors, release time, professional development, collegial collaboration, assessment of beginning teachers, an evaluation of the program, and follow-up for beginning teachers through the second year (Brooks, 2005; Horn et al., 2002; Youngs, 2002). Orientation within the BEST model focuses energy on encouraging and motivating the beginning teachers while also addressing curriculum, relationships with families, services to support students, the requirements of being a member of the BEST program, and, finally, issues regarding insurance and other human resource areas (Brooks, 2005).

Connecticut's BEST (2007) program has strict requirements for districts and beginning teachers. School districts must develop induction programs that are comprehensive, sustained, and include all of the components outlined by the state (Wong, 2004). First year beginning teachers participate in all the induction components including mentor teachers. Second year teachers might or might not continue with a mentor depending on the district's identification of additional need for support (Brooks, 2005).

Brooks (2005) conducted research regarding the BEST program and its implementation within the Hartford School District, targeting second and third year teachers. With regard to orientation, 71% of the respondents in the study indicated the time spent for orientation was beneficial and they were able to apply what they learned to their daily practice. Greater than 60% of the respondents specified they were able to apply the learning from their mentors and this learning helped them be better practitioners in their classrooms. Finally, 79% of the respondents signified common

planning time and collaborations were meaningful to them and their daily practice (Brooks, 2005). In addition, Connecticut's student achievement scores in all areas were at the top of U.S. performance levels although the minority populations had increased and the wealth per-capita within the state had declined (Darling-Hammond, 2001).

Benefits of Comprehensive Induction Programs

For more than a decade, California has implemented high-quality, standards-based induction and much has been discovered regarding the benefits of a comprehensive induction program (Bartell, 2005). Some of the benefits were higher beginning teacher retention, improved efficacy and teacher performance in beginning teachers, identification in the early stages of beginning teachers who need additional support and assistance, more effective and consistent use of teacher practices that increase student achievement, use of reflective practice by beginning teachers, and professionalism in beginning teachers with a commitment to continued learning (Bartell, 2005). The state of California has encouraged and studied comprehensive teacher induction. The impacts of this type of induction displayed an 80% district retention rate and a 90% statewide retention rate (Glazerman et al., 2008). In addition, Glazerman et al. (2010) discovered teachers receiving comprehensive teacher induction for more than one year reported greater feelings of job satisfaction as compared to a control group at the end of year two in the program.

Research in the area of comprehensive beginning teacher induction programs has focused on the components necessary to and on beginning teacher success. Ingersoll and Smith's analysis of the Schools and Staffing Survey determined beginning teachers who participated in induction programs containing six key components showed a 14%

reduction in the attrition rate (Ingersoll & Kralick, 2004). Ingersoll and Smith (2004) found when beginning teachers were given the opportunity to participate in comprehensive teacher induction and its various components, they were less likely to move to other schools or to leave the teaching profession. Access to multiple comprehensive teacher induction components has "strong and statistically significant effects" (Ingersoll & Smith, 2004, p. 33) on teacher retention rates. In addition, Ingersoll and Smith (2004) discovered as the exposure to more teacher induction components occurred, the number of beginning teachers receiving the program increased while their potential attrition decreased.

Darling-Hammond and Sykes (2003) found states and districts within those states who had committed to investing in comprehensive, purposeful teacher induction and policies historically displayed strong student achievement. In their review of research, Ingersoll and Strong (2011) reported direct correlations between beginning teachers receiving comprehensive teacher induction and student achievement rates. These rates were found within the teacher's third year of teaching and represented a significant impact on student achievement. The average student was moved from the 50th percentile to the 54th percentile in reading and to the 58th percentile in math. After two years of comprehensive teacher induction, a beginning teacher's effectiveness showed significant improvement.

Assessing the quality of an induction program is difficult; however, it is necessary to understand the impact on beginning teacher retention (Ingersoll & Strong, 2011). An induction program for beginning teachers comprised of a myriad of supports impacts beginning teacher retention more than an induction program consisting of only one or a

few supports (Ingersoll & Smith, 2004; Ingersoll & Strong, 2011). Beginning teachers who experience a comprehensive induction program enhance their professional growth and become more effective in the classroom quicker (Goldrick et al., 2012). A comprehensive induction program consisting of multiple supports can cut the turnover rate in half compared to those who do not receive this type of induction (Finn, 2003). Beginning teachers benefit the greatest when supports are through comprehensive induction and not in isolation. Teacher retention increases as the number of supports through induction increases (Smith & Ingersoll, 2004). In addition, the more intensity given to any component, presumably the greater the impact on beginning teacher retention (Glazerman et al., 2006). The strongest components shown to increase retention are mentors, common planning time and collaboration, and release time to be a part of a network of beginning teachers (Smith & Ingersoll, 2004). The greatest impact is seen when schools, districts, and states connect the definition, measurement, and improved performance of all teachers to induction (Haynes et al., 2014).

Summary

Beginning teachers enter the field of education inspired to make a difference in the lives of children (Brooks, 2005). Unfortunately, what they soon realize is the necessary tools for their success were not learned in their college course work or their student teaching (Brooks, 2005). Therefore, careful consideration of investing in comprehensive induction programs is essential to the success of teachers in the state of Colorado. Comprehensive induction grounded in the theory of learning provides for the development of beginning teachers along the continuum of professional development (Brooks, 2005). Thus, “the most effective induction programs offer bundles or packages

of supports" (Ingersoll & Smith, 2004, p. 38). Horn et al. (2002) provided a compelling definition of a comprehensive induction program: one that includes orientation, mentoring, adjustment of working conditions, release time, professional development, collegial collaboration, beginning teacher assessment, program development and follow up. The definition of comprehensive induction provided by these researchers provided the lens for examining Colorado school districts, their induction practices, and the potential correlation to beginning teacher retention.

Beginning teacher induction--its character and content--varies widely across the country and the state of Colorado. There are vast differences in length of the program, intensity of the program, mentoring frequency, and mentor training (Haynes et al., 2014). Not only are there differences in content and character, access to induction supports are inequitable as well. Therefore, promoting increased mindfulness around the needs of beginning teachers and comprehensive induction supports conceivably could begin to tackle issues related to teacher retention and enhanced instruction within schools and classrooms (Brooks, 2005).

State policies regarding beginning teacher induction do not contain a strong commitment to providing comprehensive induction programs (Goldrick et al., 2012). To achieve school reform, there must be a commitment to not only expand on induction practices but also improve the programs by which teachers are being prepared (Brooks, 2005). A strong vision of what effective teaching is should inform decisions made regarding comprehensive induction, its components, and how best to provide these for beginning teachers. If teacher policies and practices currently in place do not change,

then ambitious and rigorous state standards will simply become more unfilled reforms (Haynes et al., 2014).

CHAPTER III

RESEARCH METHODOLOGY

The goal of this research study was to gain a deeper understanding of teacher induction in the state of Colorado. Although extensive information exists regarding teacher induction and its positive impacts on teacher quality, little is known regarding teacher induction implementation within the state of Colorado. Colorado State Statute §22-60.5-204 (2005) pertaining to teacher induction in the state of Colorado provides little direction to districts concerning the design of a teacher induction program. Compelling data were needed to identify and describe the status of teacher induction in school districts across the state of Colorado and possible policy implications revealed in the data. The Colorado Educator Effectiveness Act (Colorado Department of Education, 2015) impacted teacher quality through the implementation of more rigorous evaluation processes using the Quality Standards rubric but did not address the need for teacher support through teacher induction. The findings reported on the beginning teacher induction components being implemented among school districts attempted to identify common elements among school districts and identify the number and percentage of school districts providing comprehensive teacher induction. The findings might be used to guide and support future designs of comprehensive teacher induction for the state of Colorado.

Research Question

The purpose of the methodology of this educational research study was to gather data regarding the induction components being implemented by Colorado school districts. The research study addressed the following research question:

Q1 What components do Colorado school districts include as part of their beginning teacher induction?

Research Design

Framework

Epistemology pertains to the theory of knowledge and what distinguishes belief from opinion (Crotty, 1998). Epistemology refers to the attempts researchers make to understand what is known (Crotty, 1998). The epistemological view of this study was objectivism. Objectivism as a stance asserts the world exists independent of everything; it is real and exists regardless of our hopes, dreams, socio-cultural practices, and is indifferent to these things (Briggs, Coleman, & Morrison, 2012). Research pertaining to descriptors of leadership within schools represents factual data that offer a deeper understanding of the connectivity between objective variables and the educational setting (Briggs et al., 2012). Objectivism in relation to these facts demonstrates no dependence on experience with the variables nor an understanding of the relationship of the facts (Briggs et al., 2012). The objectivism within this research study asserted the descriptors, viewed as objects, could enhance our understanding and increase our knowledge pertaining to a specific topic (Briggs et al., 2012). Gathering data pertaining to beginning teacher induction components helped describe the landscape of teacher induction within the state of Colorado.

Theoretical Perspective-Post-Positivism

Positivism provides assurance and confidence in knowledge about the world that is accurate (Crotty, 1998). On the other hand, post-positivism contains a fundamental shift from beliefs of positivism (Trochim, 2006). Post-positivism views scientific reasoning and the reasoning used in common sense as essentially the same type of reasoning (Trochim, 2006). A form of post-positivism is critical to realism. As a critical realist, the researcher acknowledges all data gathering is imperfect and contains errors. In addition, all theories that might be presented have the possibility of revision (Trochim, 2006). The context for this research study and its logic was in a post-positivist theoretical perspective. The use of a survey research design was employed to gather and use quantifiable data to describe the status of teacher induction in school districts across the state of Colorado and possible policy implications revealed in the data.

The survey research could potentially expose a need to address education legislative policy to resolve discrepancies pertaining to the components of teacher induction and their implementation in school districts in the state of Colorado. This would be dependent on possible trends identified in the analyzing of the data. Approached from a post-positivist perspective, the major findings or normative position might be recognized but could not verify or disprove the position (Briggs et al., 2012).

Method

Survey research is used as a method to gather standardized data from a large sample of participants (Briggs et al., 2012). The survey research method for this study used a questionnaire to collect data and descriptive statistical analysis of the data collected. The survey questionnaire for this research design was developed online using

Qualtrics (Version 2014). The questions were written using nine induction components as a guide, asking if each of the induction components was or was not provided by the school district or Board of Cooperative Educational Services (BOCES). In addition, some of the induction components had more in-depth questions to attempt to determine the level of implementation of the component by the school district or BOCES. A panel was designed within Qualtrics using an Excel® spreadsheet containing the school district superintendent and BOCES contact information. Dates were set within Qualtrics for the three times the survey was dispersed. The University of Northern Colorado (UNC) Social Research Lab was consulted concerning the design of the survey and for the analysis of the data (see Appendix A). The UNC Social Research Lab aided with the design of the questions and encouraged me to include the definitions for each of the induction components. In addition, the UNC Social Research Lab aided in the uploading of the contact information spreadsheet and setting up the panel and distribution dates. The collected data were to be transferred to the Statistical Packaging for the Social Sciences (SPSS) to organize the responses to the questionnaire. Due to the small sample size, the UNC Social Research Lab deemed this unnecessary and determined it would not be helpful in the analysis of the data. The UNC Social Research Lab helped me understand how to set up and analyze the frequency distribution tables and graphs employed to simplify the data description. This simplification occurred through the use of a depiction of responses across categories of school districts and for each single variable of comprehensive teacher induction (orientation, mentoring, adjustment of working conditions, release time, professional development, opportunities for collegial collaboration, teacher assessment, program evaluation, and follow-up; Glazerman et al.,

2006; Horn et al., 2002). Analysis of the data described potential trends found in the characteristics of the responses. Potential trends included but were not limited to large school districts providing more teacher components and small school districts providing less or vice-versa; certain components were not included within the teacher induction. The findings informed the recommendations for educational practice, research, or policy revisions related to the research problem.

Participants

Public school district superintendents or their designees in the state of Colorado and Boards of Cooperative Educational Services (BOCES) executive directors were participants for this study. There are 179 public school districts and 17 BOCES in the state of Colorado. Boards of Cooperative Educational Services were included because some of the intermediate education agencies are teacher induction providers for member districts. Private school districts were not included in the study because funding was not provided to them through the state. The school districts and BOCES contact information was gathered through the Colorado Department of Education (CDE) or from school district websites. Superintendents and BOCES executive directors were invited to participate in the study and asked to share the survey with the person responsible for teacher induction in the district or cooperative if not the superintendent or executive director. The invitation was sent through an email correspondence (see Appendix B) and provided the University of Northern Colorado Institutional Review Board's (IRB) authorization for the study (see Appendix C); the research study was considered an exempt study as no vulnerable populations were included. Adults were the only participants (see Appendix D for consent form).

Setting

The setting for the research study was public school districts and BOCES across the state of Colorado. The goal was to obtain participation from a majority of school districts and BOCES in Colorado. Colorado State Statute §22-60.5-204 (2005) for teacher induction does not have clear mandates for teacher induction, its components, and implementation. The guidelines for teacher induction provided by the state can be perceived in many different ways and support the premise that notable trends between school districts and BOCES are not a consequence of legal requirements but of local control decisions within that district and the choice to employ BOCES. Therefore, the data could support a need for legislative revisions if inequities are found in the data trends.

Data Collection

The collection tool used for the research data was an electronic questionnaire (Creswell, 2012). The design for the electronic questionnaire was developed based on research literature to ensure validity using Qualtrics (Version 2014) and was emailed to participants. Included in the questionnaire were definitions for key terms, found in Chapter I, to ensure that if the survey was given to a similar population the results would be the same. The format for response was structured, dichotomous questions with yes/no answers (Trochim, 2006). A sample questionnaire is included in Appendix A.

A field test of the survey was conducted to ensure the participants were able to complete the survey and could understand the questions being asked. The field test also answered whether or not the questionnaire adequately measured the research question (Briggs et al., 2012; Creswell, 2012). The field testing of the questionnaire occurred two

times--first with the development of final survey questions supported by the University of Northern Colorado Social Research Lab and then using a draft questionnaire administered to a convenience sampling of educators outside the target population to receive feedback and make any necessary changes to the questionnaire based on the feedback.

Ascertaining a strong response rate is important to consider when using survey data collection (Creswell, 2012; Stroop, 2005). Adequate survey response rates are typically recommended to be in the 50-70% range (Nulty, 2008). Use of online survey questionnaires raises particular concerns as the response rate is usually less than 30% (Hager, Wilson, Pollak, & Rooney, 2003). Hager et al. (2003) found when conducting organization practice surveys, as opposed to personal information surveys, response rates were some of the lowest. An acceptable response rate for these types of data collection has been as low as 15%. Therefore, due to the use of an online, organizational practice survey, response rates may be lower (Hager et al., 2003).

In response to potential low response rates, procedures known to increase response rates were employed (Briggs et al., 2012; Creswell, 2012; Hager et al., 2003). Data collection was conducted at the end of the school year in June, lasted for a period of three weeks, and employed a three-phase survey administration procedure described by Creswell (2012):

1. First email of electronic questionnaire, week 1
2. Second email of electronic questionnaire, week 2
3. Electronic questionnaire completion reminder email, week 3

The Educator Effectiveness Act (Colorado Department of Education, 2015) could potentially create interest in the study. Participants might be interested in how to meet the needs of their teachers who score low on the rubric; this interest was anticipated to increase the response rate (Creswell, 2012). All participants who completed a questionnaire received a thank you message.

The survey study population consisted of school districts and BOCES in the state of Colorado and their leaders. A census study was used to attempt to include the entire population of Colorado school districts, BOCES, and their leaders (Creswell, 2012). The population of school districts, BOCES, and their leaders was relatively small and easily identified; therefore, the study population was equivalent to179 school districts and 17 BOCES (Creswell, 2012). As the contact information was readily available for school districts, BOCES, and their leaders, the entire population was targeted and included within the survey design to encourage a comprehensive description of the surveyed group (Creswell, 2012). The findings of the study were not generalized to a larger population and were only used to describe the responses of the respondents.

To increase the response rate as well as garner participant interest, email correspondence (see Appendix B) was sent to the identified school district and BOCES leaders that contained a message detailing the nature of the study and my personal interest in the research. Within the email was a link to the electronic questionnaire (see Appendix A). In addition, IRB approval was included in the online survey (see Appendix C). An electronic signature for participation in the study was also included in the survey (see Appendix D); completion of the survey indicated consent to participate. Confidentiality of data collection was indicated in the email. Non-respondents to the

online questionnaire were considered part of the data collection and were addressed in data analysis.

Data Analysis

The primary purpose in survey research design is to describe the data in relation to how it answers the research question (Creswell, 2012). In addition, it is important to review and consider whether the descriptive statistical analysis findings support or disclaim previous research findings (Creswell, 2012). The process for data analysis is outlined below. In analyzing the response rates, the intent was to contact a representative sample of non-respondents. The intent to contact non-respondents was not included in the IRB proposal and when contacted, the IRB committee declined my request to amend the proposal to include contact of non-respondents. Therefore, no attempt was made to contact non-respondents. Specific to this study, descriptive statistics analyzing the frequency of responses by descriptors including the mean, standard deviation, variance, sum, minimum, maximum, and the range of variables were intended to support the identification of trends in the data demonstrating relationships by using Pearson's *r* between the characteristics of a district and the implementation or lack thereof of teacher induction components. The sample size was inadequate to enable the use of Pearson's *r* and any of the other statistical measures; therefore, the analysis was purely descriptive in nature.

The following steps were utilized to analyze questionnaire data:

Step 1: Identify response rate

- Develop table for percent of responses
- Analyze response and non-response rates to target response rate

Step 2: Descriptively analyze the data to identify general trends

- Calculate and present a table of descriptive statistics for each questions on the instrument using frequency tables
- Analyze data to provide answers to research question

Step 3: Write presentation of descriptive results and findings: Analyze frequency tables and graphs for trends

The intent of the survey design data analysis was to use descriptive statistics in identifying possible trends within the measured categories and to provide answers to the research question, "What components do Colorado school districts include as part of their beginning teacher induction?" School districts and BOCES were not identified by name but rather by trends in the data sets based on similar characteristics.

Data Handling Procedures

Ethical issues that might have risen within the study were informed consent procedures, confidentiality of participants, and benefits to the participants versus potential risks (Creswell, 2012). Regarding consent procedures, participants were informed in the initial email requesting participation of the purpose and intent of the research being conducted. Confidentiality of participants was maintained through the use of randomly assigned numbers generated within the panel assignment of Qualtrics and within the analysis and reporting of the data.

Data storage was another aspect for ethical consideration. Survey data were stored within Qualtrics and my password protected computer until the research was completed and the possibility of publication could be determined. Upon completion of

the research, whether that results in an approved dissertation or publication, these files will be deleted. Contact information for the participants will be deleted as well.

Risks associated with this study were minimal. The focus was on teacher induction practices within school districts and BOCES. There were no threats to the school districts or the BOCES regardless of the outcomes of the research. The data were non-threatening and were handled with confidentiality, ensuring no individual, individual district, or BOCES was singled out or known to anyone other than me as the researcher. Using numbers instead of specific names protected school district and BOCES identities.

Discomforts of the study would only occur if significant differences were found between districts, BOCES, and their actual practices around teacher induction. In the initial email to superintendents and BOCES executive directors, I assured the superintendents the intent of the study was not to point fingers or to discover discrepancies. The intent of the study was to provide descriptive data as to the practices of teacher induction within the state of Colorado and the potential to provide persuasive evidence to support comprehensive teacher induction for all beginning teachers in the state of Colorado. I was hopeful the superintendents and directors would support the study as it had potential to positively impact their districts and cooperatives.

Reliability

Reliability refers to whether the scores on a given instrument, such as this study's survey questionnaire, are stable and consistent (Briggs et al., 2012). Reliability ensures future studies would arrive at similar results or could be replicated. Areas considered in ensuring reliability included the equivalency of concepts or characteristics being measured and internal consistency, which demonstrates the extent the chosen method was

able to assess the intended concept or characteristic (Briggs et al., 2012; Creswell, 2012; Trochim, 2006). The design of survey data collection addressed the areas of reliability. Equivalency was ensured through the survey by measuring the same questions with the same definitions.

The survey research design contained clear administration procedures for obtaining contacts and contacting the survey population, which addressed the threat to reliability. The survey population sample was not intended for generalization to larger populations and the analysis was descriptive of collected data from respondents. The survey questions were developed based on the research literature and were reviewed with an expert in survey design to ensure the questions measured what was intended. Focusing on these considerations during the development, collection, and analysis of the study ensured the reliability of the study.

Conclusion

Implementation of the Educator Effectiveness Act (Colorado Department of Education, 2015) is at the district and school level. Although laws have been changed regarding evaluation in the state, the statute relating to teacher induction remains the same. Potential support necessary for beginning teachers as seen through a school district lens can enhance the understanding of the connection between teacher induction, teacher effectiveness, and teacher retention with evaluation in the background. The study of induction components was needed to inform potential policy decisions regarding the statute for teacher induction.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

In this chapter, analyses of the collected data are presented to answer the following research question:

Q1 What components do Colorado school districts include as part of their beginning teacher induction?

The analyses are presented in three sections using data gathered within the Qualtrics software program. Tables and graphs were created within Excel® using Qualtrics data. Section one describes the sample size and limitations found in the analyses of the data. Section two, Teacher Induction Components in Colorado School Districts, describes data found pertaining to each of the teacher induction components, the level of implementation within the school districts in Colorado, as well as analyses of components in relation to the size of the district. Section three, District Size and Induction Components, details the differences found between the size of school districts and induction components being implemented.

Sample Size Analysis

The intended sample included 179 school district superintendents and 17 BOCES executive directors. School district and BOCES contact information was obtained through the list from the Colorado Department of Education (2016) or from websites for

the school districts and BOCES. Surveys were sent to email addresses for each potential participant using the Qualtrics software's panel function. Ninety participants opened the email and 37 participated in the survey. The number of participants was much lower than expected due to the timing of the survey in June. Limitations to the response rate included an assumption that school district and BOCES leaders would be more willing to answer a survey in June when schools were closed for summer vacation. Determining a strong response rate is important when a survey is employed for research (Creswell, 2012; Stroop, 2005). A typical response rate of 50-70% is recommended; however, online surveys tend to garner about a 30% response rate (Nulty, 2008). The response rate for this research study was 19% of the total sample.

The small response size impacted the data analyses in a variety of ways. The small sample size resulted in low statistical power, failing to detect significance. Differences were discovered between size and induction components provided but not with statistical significance. Second, the respondent size was similar to the distribution of district size within the state of Colorado (see Figure 1). One survey question asked for the size of the district the participant was representing. The categories were 50,000 or more students representing four districts; 21,000 to 49,999 students representing nine districts; 10,000-20,999 students representing seven districts; 5,000-9,999 students representing 12 districts; 1,000 to 4,999 students representing 41 districts; and less than 1,000 students representing 106 districts. There were two reported categories for district size: 1,000 to 4,999 students and less than 1,000 students, which accounted for the two largest response rates, 40 and 105, respectively. One category for district size--50,000 or more students--had zero responses (see Figure 2).

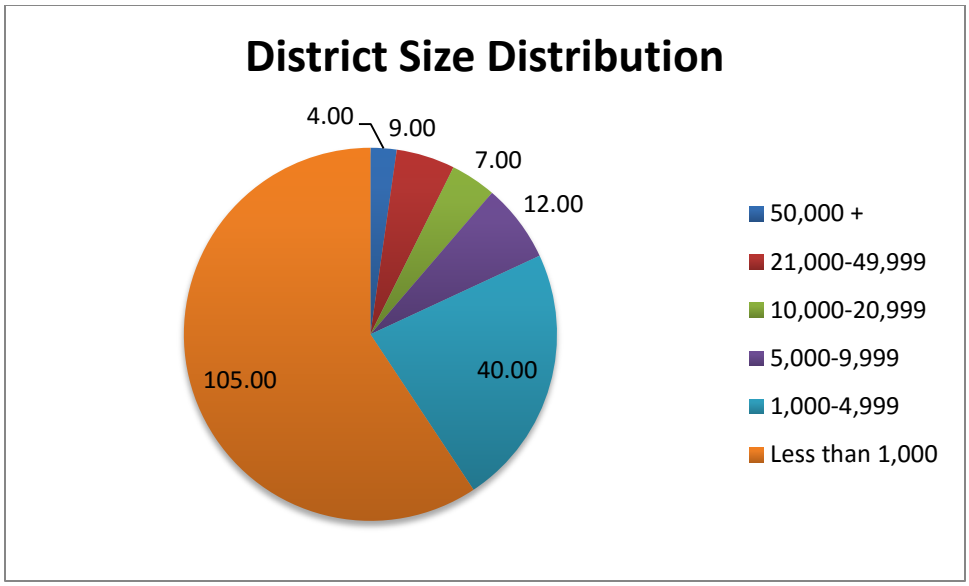


Figure 1. The distribution of school districts within the state of Colorado.

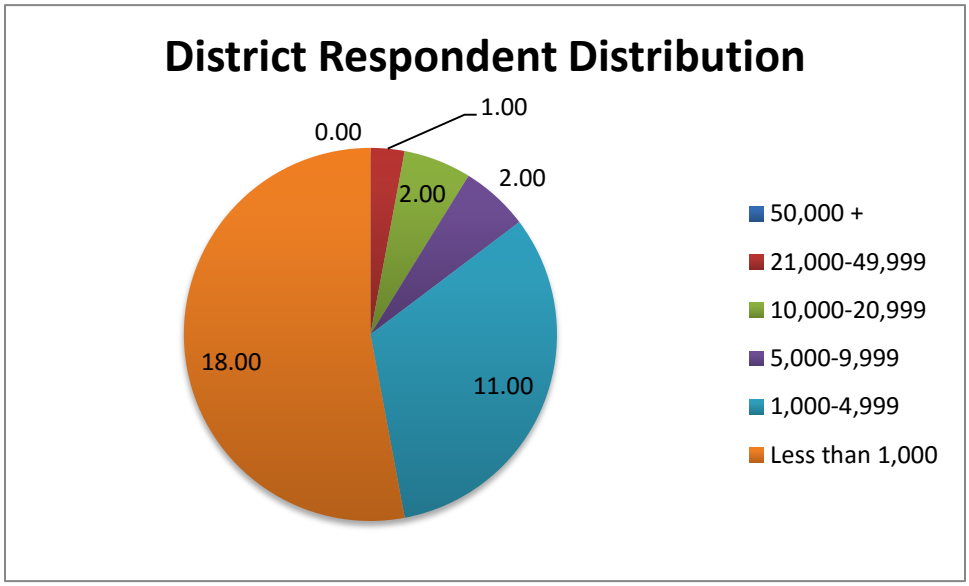


Figure 2. The distribution of responding districts within the state of Colorado.

Three follow-up attempts were made to contact participants with one week between each contact email. The follow-up emails contained a reminder to complete the

survey on the second attempt and a final reminder to complete the survey in the last email. One potential participant requested removal from the distribution list because the district had a specific policy regarding requests to participate in research and the research for this study was being conducted outside policy guidelines. Nine responses were gathered on the first day and five additional responses were gathered during that week. The second distribution occurred one week later. Six responses were gathered on that day and seven more were collected throughout the following week. The final distribution of the survey occurred three weeks after the initial distribution, garnering two responses on that day and eight more in the following week (see Figure 3). The timing of the survey distribution (summer) could have been a contributing factor to the low response rate.

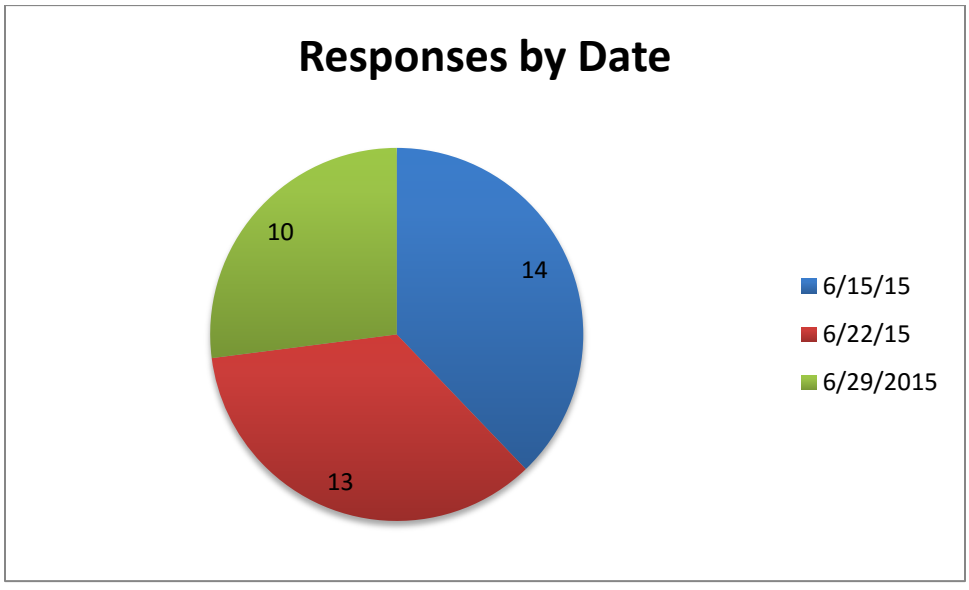


Figure 3. Survey response rate by date.

Teacher Induction Components in Colorado School Districts

Teacher induction components surveyed included Horn et al.'s (2002) nine common features of induction programs. Horn et al. believed the following nine features created a sound induction program: orientation, mentoring, adjustment of working conditions, release time, professional development, opportunities for collegial collaboration, teacher assessment, program evaluation, and follow up. An analysis of each component used in participating districts is presented in this section.

Teacher Induction

Teacher induction can be viewed as the "mortar that cements pre-service training to continue in-services professional development" (Reinhartz, 1989, p. 4). Teacher induction is a purposeful program intended to "provide systematic and sustained assistance to beginning teachers for at least one school year" (Huling-Austin, 1990, p. 536). Thirty-three of the responding districts (97%) reported providing teacher induction to all beginning teachers. One school district reported teacher induction was not provided for new teachers. However, based on the analyses within the teacher induction components, this district might have included parts of teacher induction without naming it a teacher induction program within the professional development. One district reported teacher induction was not provided; yet this same district provided some of the other components.

Orientation

Orientation occurs at the beginning of the school year with the intent of introducing new teachers to the district, its mission, vision, and goals as well as the main facets of the school in which they will be teaching (Heidkamp & Shapiro, 1999). The

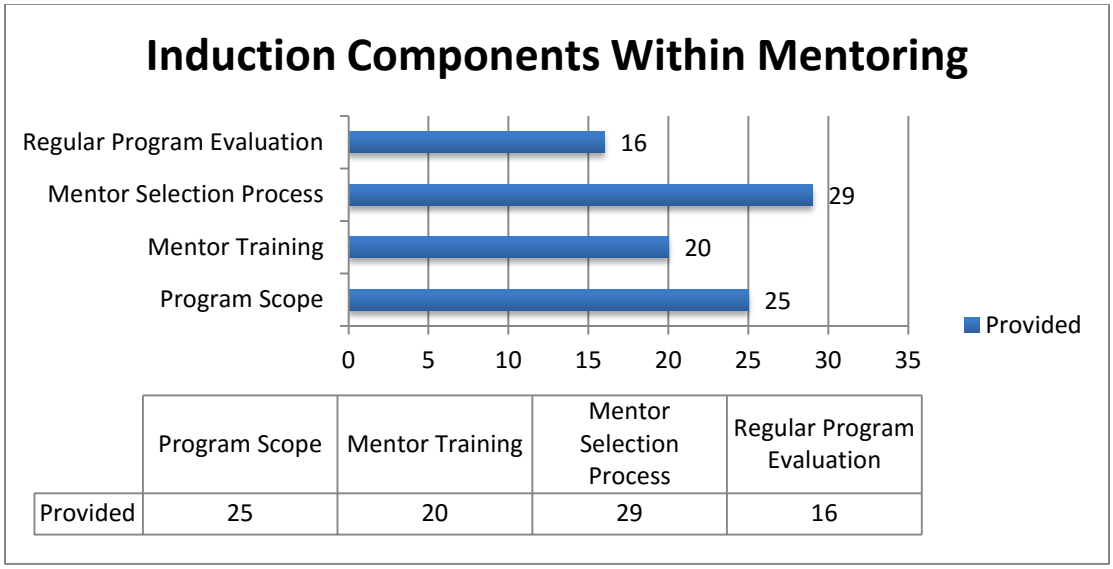
results of the data analyses revealed 29 of the responding Colorado school districts and three of the responding BOCES (97%) provided some sort of orientation for new teachers. One school district (3%) did not provide an orientation. Twenty-nine of the responding school districts and two of the responding BOCES (94%) provided an orientation before the school year began, one BOCES (3%) did not provide any orientation, and another district (3%) provided an orientation both before school began and at other times depending upon circumstances, which included mid-year hiring of beginning teachers.

The majority of responding districts (85.29% or 24 districts and three BOCES) reported orientation was one half-day to three days in length. Four school districts (12%) reported their orientation consisted of a full week. One district (3%) took a novel approach to orientation and provided classes for credit throughout the school year. Two of the responding BOCES (6%) provided orientation at the beginning of the year while one did not.

Mentoring

In the context of induction, a mentor is a veteran teacher who has been partnered with a beginning teacher to provide "systematic and sustained assistance" (Strong & Baron, 2004, p. 48). When asked if the school district provided mentoring to beginning teachers, 100% of the responding districts and BOCES answered "yes." Within mentoring, several variables were investigated. Districts and BOCES were asked if they had a program scope for the mentoring of new teachers. Of the respondents, 22 districts and three BOCES (78%) had a program scope for mentoring of beginning teachers. A program scope contains the types of support mentors will provide and a sequence of those

supports throughout the year (Strong & Baron, 2004). Training of mentors is another important variable within mentoring. Seventeen districts and three BOCES (64%) provided training while 13 districts (37%) did not provide specific mentor training. When assigning mentors, a selection process is desirable (Bolich, 2001; Dagenais, n.d.; Feiman-Nemser et al., 1999). The majority of respondents (83% or 28 districts and one BOCES) reported having a selection process. Finally, the respondents were asked if they regularly evaluated the mentor program. The data revealed 15 districts and one BOCES (47%) regularly evaluated their mentor program while 15 districts and two BOCES (53%) did not (see Figure 4).



	Program Scope	Mentor Training	Mentor Selection Process	Regular Program Evaluation
Provided	25	20	29	16

Figure 4. Induction components within mentoring.

Adjustment of Working Conditions

Adjustment of working conditions pertains not only to reducing the number of courses a beginning teacher is responsible for but also managing the difficulty of the

student population for which a beginning teacher is accountable (Brooks, 2005). School districts and BOCES were asked if they adjusted working conditions of beginning teachers. Of the respondents, 16 districts and two BOCES (57%) reported not adjusting the working conditions of teachers while 13 districts and one BOCES (43%) did. Within the adjustment of working conditions, decreased class sizes and fewer class periods are desirable within a teacher induction program (Horn et al., 2002; Selzer, 2000). In the responding school districts and BOCES, only three districts and one BOCES (29%) provided this type of adjustment to working conditions. In addition, 10 school districts and two BOCES (80%) did not provide additional planning periods for beginning teachers (see Figure 5).

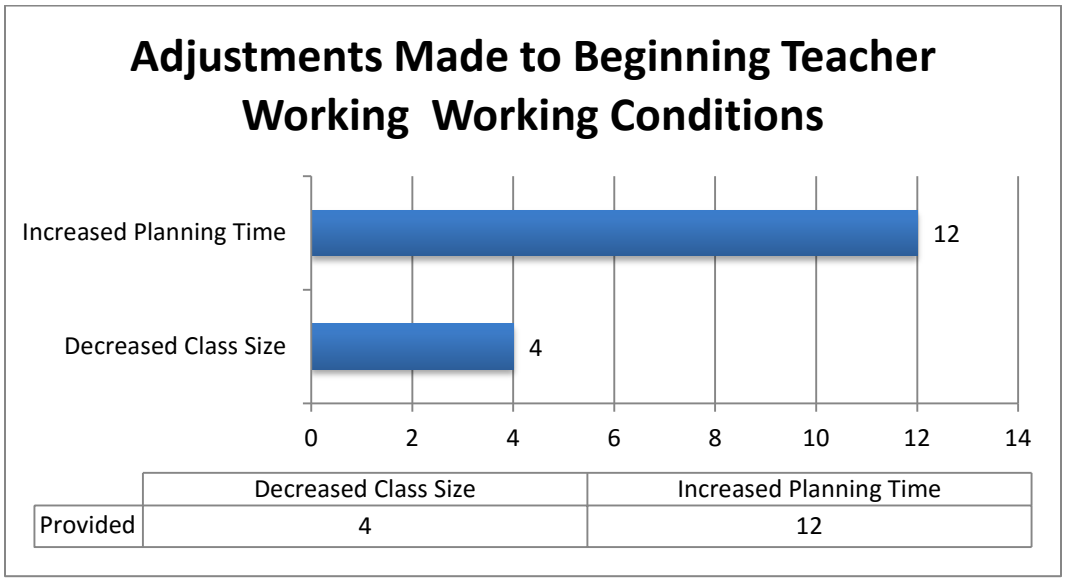


Figure 5. Adjustments made to beginning teacher working conditions.

Release Time

Release time offers the opportunity to take part in induction events that potentially occur during the contracted school day (Arends & Rigazio-DiGilio, 2000; Feiman-Nemser et al., 1999). Sixteen school districts and three BOCES (78%) reported they provided release time for beginning teachers to take part in induction activities during the contracted school day. A portion of this release time was reported to be for beginning teachers to observe mentors and peers. All of the responding school districts and BOCES (100%) reported providing this to beginning teachers. Nineteen school districts and three BOCES (79%) reported providing release time for team planning and/or collaborative problem solving (Figure 6).

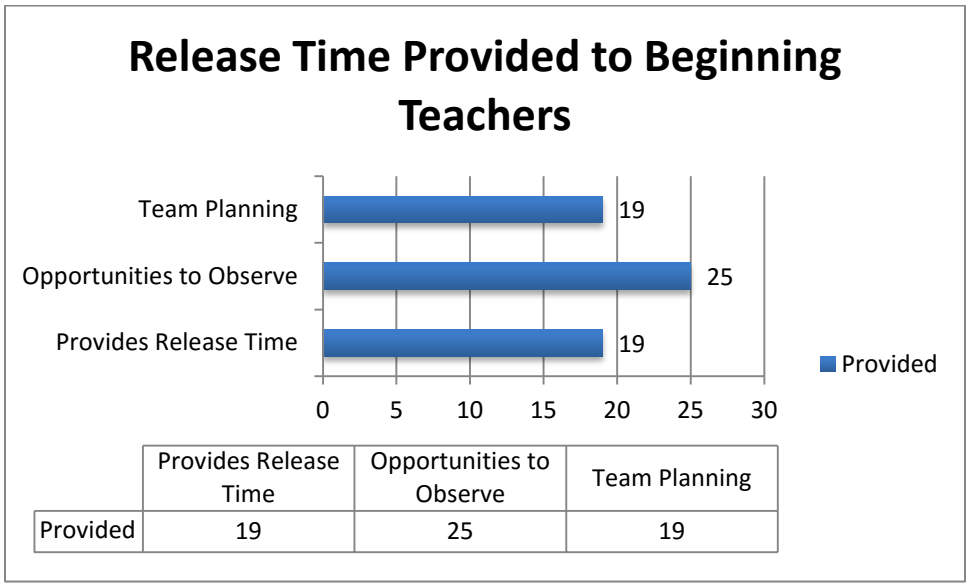


Figure 6. Release time provided to beginning teachers.

Professional Development Opportunities

The intent of professional development is to build a firm foundation for beginning teachers in the role of the profession and to advance knowledge, skills, and attitudes necessary for the career on which they are embarking (Darling-Hammond et al., 1999). All of the respondents reported providing professional development opportunities for beginning teachers. Additionally, districts and BOCES were asked the number of hours of professional development provided for beginning teachers. Nineteen districts and one BOCES (58%) reported 10 or more hours while nine districts and two BOCES (36%) reported less than 10 hours. Two districts (6%) reported they provided 20 or more hours or four days of professional development included in a beginning teacher's contract (see Figure 7).

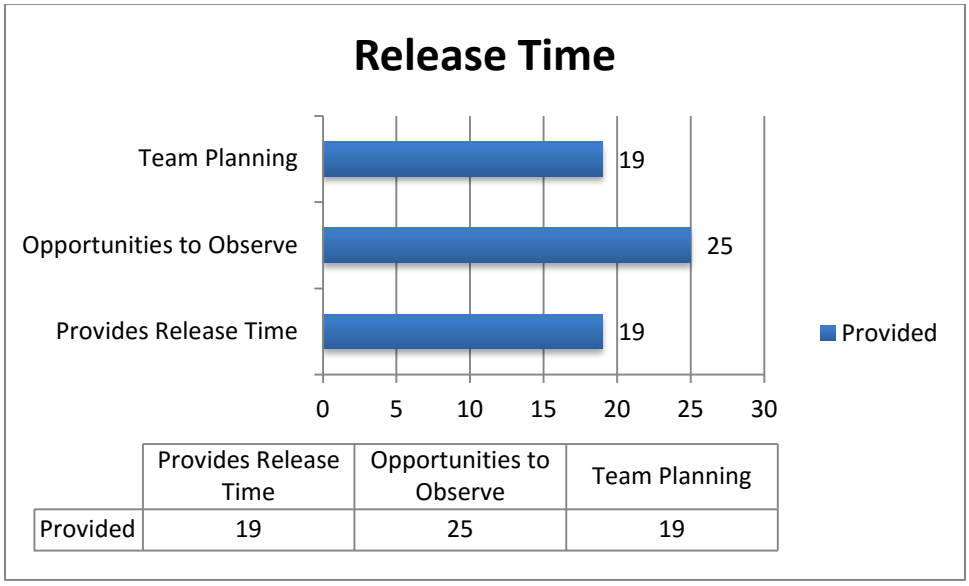


Figure 7. Professional development opportunities provided to beginning teachers.

Opportunities for Collegial Collaboration

Collegial collaboration can aide in helping beginning teachers combat feelings of isolation and contributes to building an environment where teaching is both cooperative and collaborative (Fallon, 2004). Twenty-eight responding school districts and three BOCES (94%) reported beginning teachers were provided with opportunities to participate in collegial collaboration. Only two school districts (6%) reported not providing this opportunity.

Assessment of Beginning Teachers

The assessment of beginning teachers is formative in nature and should be tied to teacher standards with the intent of fulfilling teacher licensure requirements (Darling-Hammond & Loewenberg Ball, 1999). The majority of responding districts (77% or 21 districts and three BOCES) directed their mentors to assess beginning teachers and provide constructive, non-evaluative feedback. The nature of this feedback was not revealed within the data. Twenty-three percent of the school districts did not require their mentors to assess the beginning teachers they worked with as represented in Figure 8.

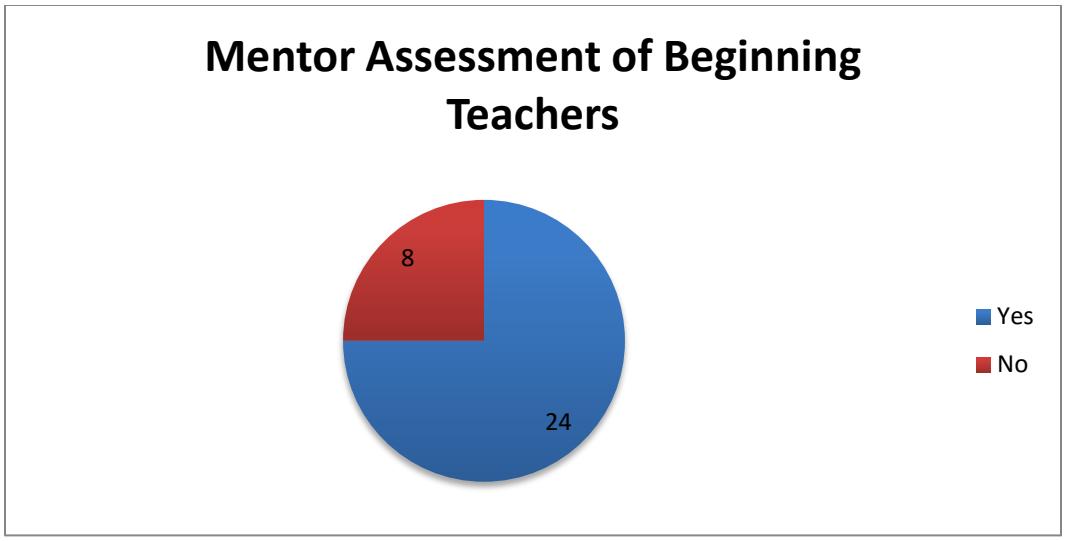


Figure 8. Percentage of Colorado school districts that provide for mentors to evaluate beginning teachers.

Program Evaluation

To monitor effectiveness, induction programs need an ongoing, comprehensive system for evaluating the program. The system should include any and all participants and stakeholders within or involved in the induction program (Britton et al., 2000). Reporting school districts and BOCES were split on whether or not they evaluated their teacher induction program regularly for effectiveness. Fifteen reporting districts and three BOCES (58%) evaluated their programs while 42% did not (see Figure 9).

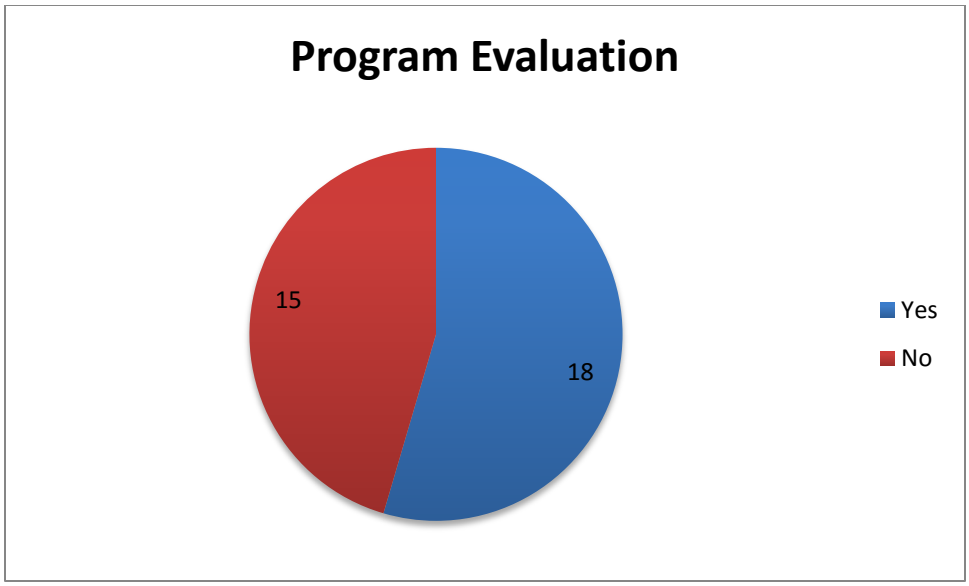


Figure 9. Regular evaluation of the induction program.

Follow-Up Support

Beginning teachers are certainly not experts after only one year; the majority of beginning teachers will need support into their second and possibly third years (Horn et al., 2002). Follow-up support is provided for beginning teachers in their second and potentially third years. Providing additional support to beginning teachers for follow-up as needed is another desired element of teacher induction. Twenty-six responding school districts and one BOCES (85%) reported they provided additional support to beginning teachers on an as-needed basis.

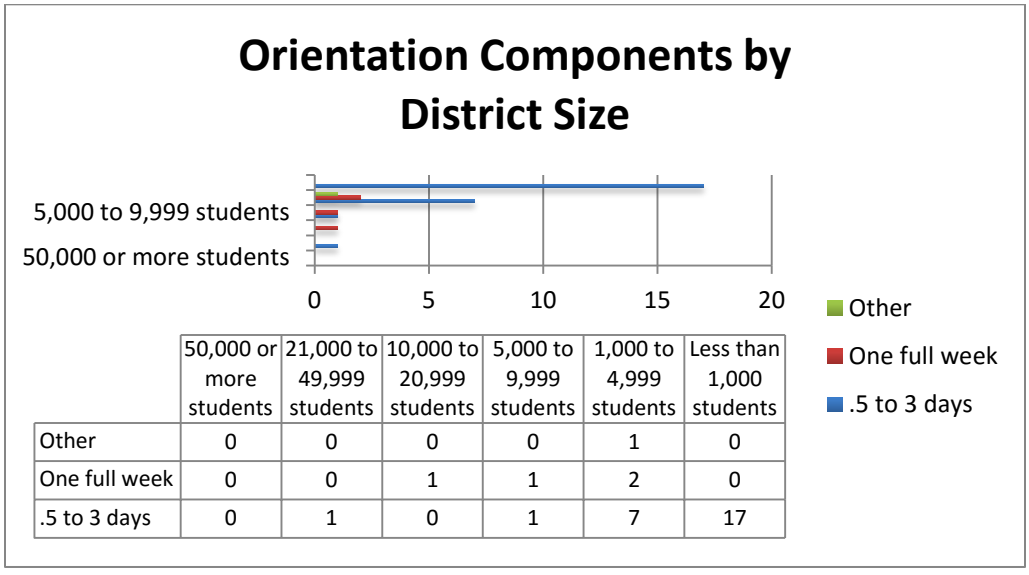
District Size and Induction Components

The size of the district was analyzed in relation to the induction components being provided for beginning teachers. Research has shown the more components provided to beginning teachers the higher the likelihood of retention in the field (Ingersoll, 2012). Beginning teachers who are supported through a comprehensive induction program

consisting of six or more induction components are more likely to remain in the profession and are more likely to be successful (Ingersoll, 2012). The current study analyzed induction components individually as well as combined in an induction program. The following section describes the induction program components offered individually as well as together across the responding Colorado school districts by district size. The patterns regarding components not offered by responding districts were also analyzed. Due to the small sample size, few differences stood out in the data.

Orientation

As reported in the implementation section above, one district reported not providing orientation. The size of this district was less than 1,000 students. Due to the size of the district, the number of new teachers needing orientation was likely minimal. The majority of responding districts (60%) provided orientation ranging from a half day to three full days (see Figure 10).



	50,000 or more students	21,000 to 49,999 students	10,000 to 20,999 students	5,000 to 9,999 students	1,000 to 4,999 students	Less than 1,000 students
Other	0	0	0	0	1	0
One full week	0	0	1	1	2	0
.5 to 3 days	0	1	0	1	7	17

Figure 10. Orientation components provided based on district size.

Mentoring

The larger the size of the responding district the more mentoring induction components were provided. Six districts (21%) having below 5,000 students did not have a set program scope for mentoring. In addition, 11 of the respondents (39%) from these district sizes reported training was not provided to mentors. Four of these same districts (14%) did not have a specific selection process for mentors. Finally, 17 school districts (61%) of this size did not regularly evaluate their mentor programs (see Figure 11).

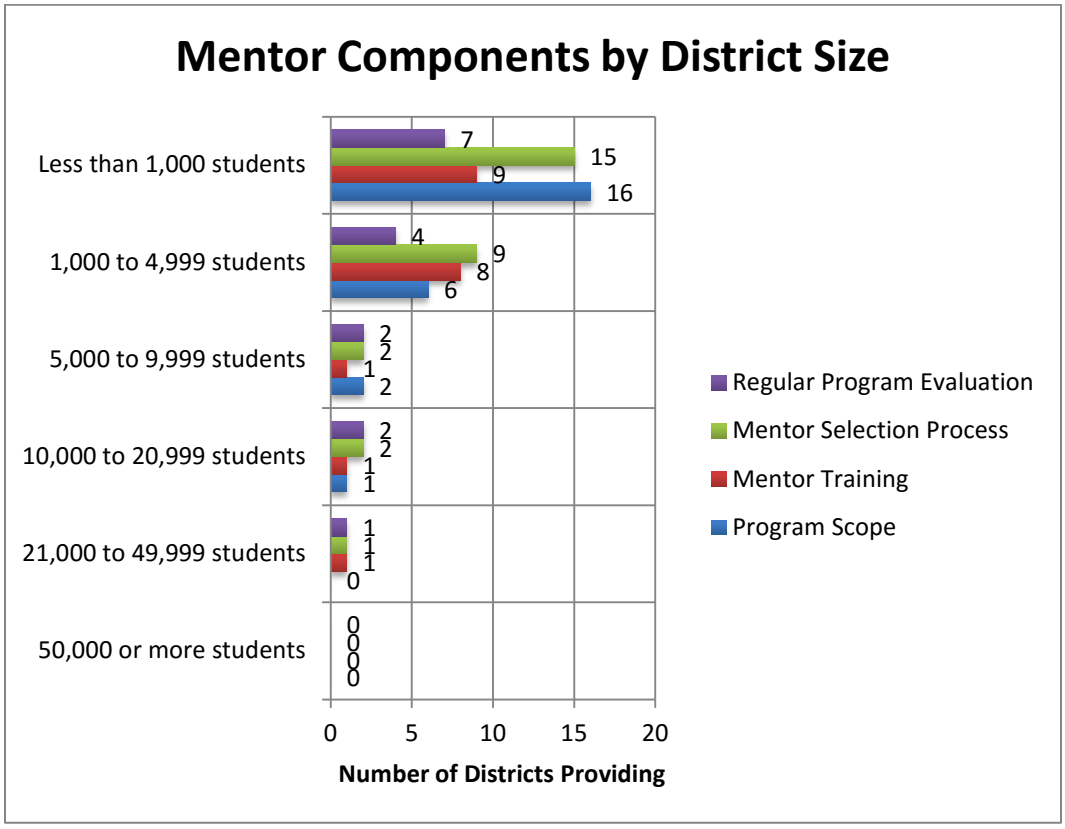


Figure 11. Mentor components provided by district size.

Adjustment of Working Conditions

Thirteen school districts below 5,000 students (48%) confirmed an adjustment to working conditions occurred for beginning teachers. However, it was limited adjustment. Decreased class sizes or fewer periods to teach were provided to beginning teachers in 4 of 10 responding districts having less than 1,000 students--these were the only districts that provided these adjustments. In addition, two districts with less than 5,000 students provided increased planning time during the school day. Adjustment of working conditions across the board was one of the least implemented of the induction components.

Release Time

Examining the data for release time indicated there was no pattern between the size of the district and the amount of release time provided. Release time data were not indicative of whether the release time was for the beginning teacher or for the mentor. The size of the responding districts did not affect the results for release time. Six districts responded they did not provide release time to beginning teachers.

Professional Development Opportunities

All districts provided professional development to beginning teachers as part of their induction program. These opportunities should be designed around real-life experiences and problems and sustained through collaboration and reflection over time (Feiman-Nemser et al., 1999). The majority of districts provided 10 or more hours of professional development. Two school districts provided ongoing professional development as needed by the beginning teacher.

Opportunities for Collegial Collaboration

District size was not a factor in the implementation of opportunities for collegial collaboration. Collegial collaboration was provided in some responding districts and not others. Wong (2004) asserted these collegial conversations must become the norm for beginning teachers because working together helps beginning teachers learn to problem solve and can ultimately lead to a higher level of potential.

Assessment of Teachers

A mentor assessing beginning teachers occurred in the majority of responding districts. Districts of 5,000 students or less provided this type of assessment and feedback to beginning teachers (see Figure 12). The type of assessment provided was not reported. In addition, the amount of assessment and feedback provided was not reported within the data.

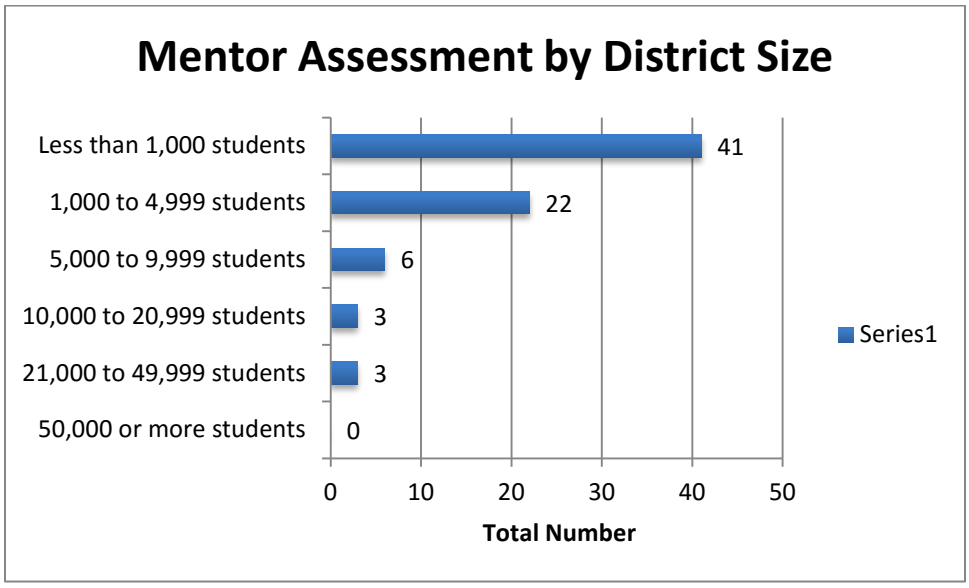


Figure 12. Mentor assessment of beginning teachers by district size.

Program Evaluation

Evaluation of the induction program was split across the responding districts. Districts larger in size reported evaluating the program on a regular basis. Districts of 5,000 or less students did not evaluate the induction program on a regular basis (see Figure 13). The type of evaluation used was not reported nor was the specific time frame in which evaluation occurred.

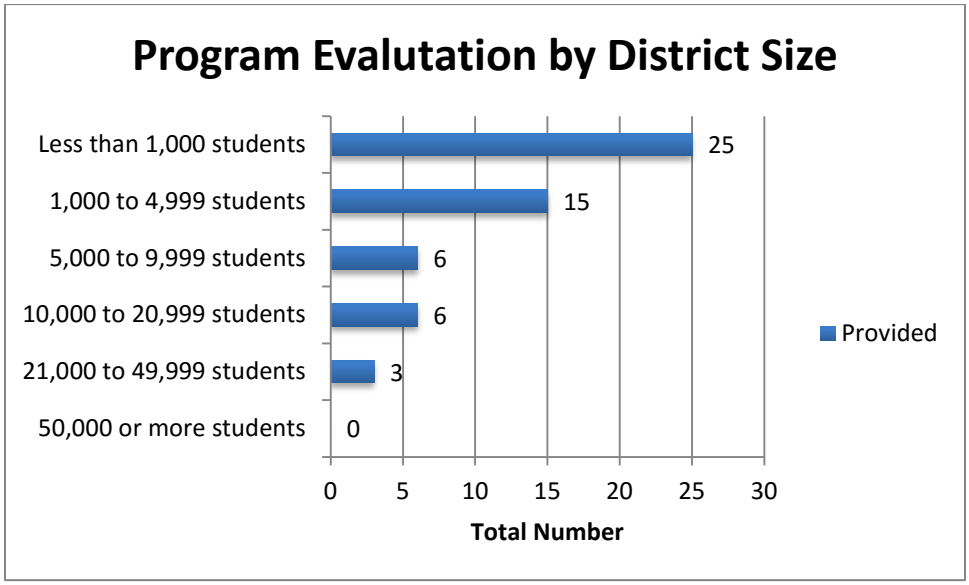


Figure 13. Evaluation of induction program by district size.

Follow-Up

Follow-up support for beginning teachers was a component that was regularly provided. However, some districts did not provide it. Fourteen responding districts (42%) with less than 1,000 students accounted for the greatest percentage of follow-up support provided; 10 districts with 1,000 to 4,999 students reported 30% were provided with follow-up support. The two larger school district categories--10,000 to 20,999 and

21,000 to 49,999--both had one district each (3%) that provided follow-up support to beginning teachers (see Figure 14).

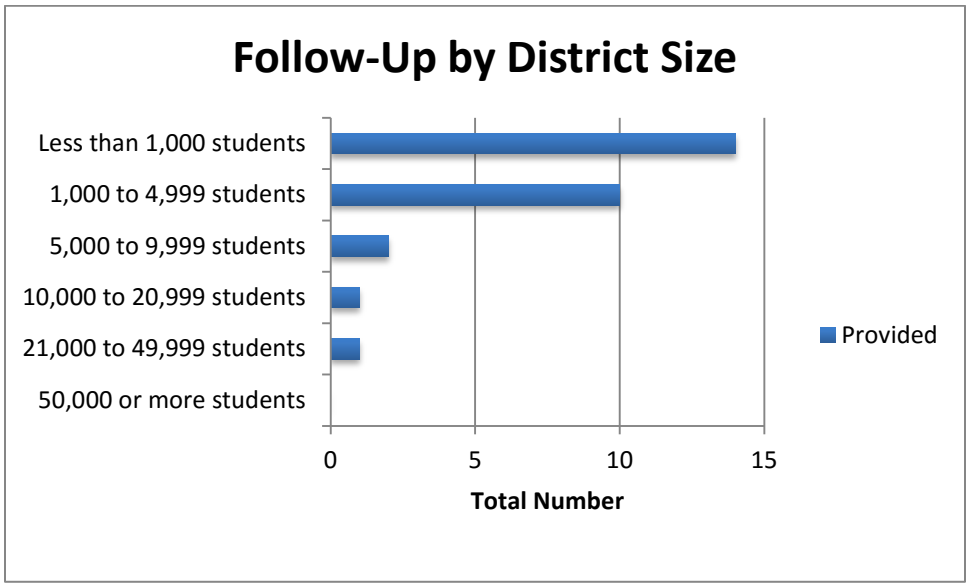


Figure 14. Follow-up services provided to beginning teachers by district size.

Summary

As mentioned throughout the data analysis, districts of 50,000 or more students were not represented in the sample. One responding district of 21,000 to 49,999 students reported providing eight of nine induction components. Two districts of 10,000 to 20,999 students participated in the survey. One district reported providing all nine induction components while the other district reported providing six of the nine components. Two districts of 5,000 to 9,999 students participated. One district reported providing eight of nine components while the other reported providing seven of nine components.

Districts in the lower two student population categories had the greatest differences in induction components provided. These two categories also had the

majority of participants. In districts having 1,000 to 4,999 students, the induction components provided were spread out. Four of the 10 responding districts reported providing all nine induction components. One district reported providing eight of nine and two districts reported providing seven of nine components. Finally, three districts reported providing six of nine induction components. Districts of less than 1,000 students had similar data. Eight of 18 reporting districts claimed to provide all nine induction components. One district reported providing eight of nine components. Four districts provided seven of nine, one district provided six of nine, two provided five of nine, and, finally, one district provided only two of the nine induction components.

An analysis was also conducted in an attempt to describe which induction components were not included in district induction programs. The adjustment of work conditions was the most common component left out of an induction program. Adjustment of work conditions was left out of at least one district in each category. The second most common induction component left out was mentors assessing beginning teachers and providing feedback. This component was left out of three of the six district size categories. The remaining components were left out of two district size categories. Table 1 is a representation of the distribution of survey answers by district size. In summary, responding Colorado school districts in general provided six or more of the nine induction components needed to help retain beginning teachers. Thirty-one of 33 (94%) reporting districts provided six or more components for their beginning teacher induction programs.

Analyses of teacher induction components yielded results of importance to the current study. First, teacher induction components were found in all sizes of school

districts across the state of Colorado. In addition, the number of teacher induction components provided as an induction package was found across the state in a majority of district sizes. The analyses indicated which teacher induction components were most likely to be left out of a program and provided patterns across district sizes. However, the small response size limited the ability of the study to generalize to the entire state.

Table 1

District Size Compared to Induction Components Included

		50,000 or more students	21,000 to 49,999 students	10,000 to 20,999 students	5,000 to 9,999 students	1,000 to 4,999 students	Less than 1,000 students	Total
The school district or BOCES cooperative provides teacher induction for all beginning teachers	Yes	0	1	2	2	10	17	32
	No	0	0	0	0	0	1	
	Total	0	1	2	2	10	18	33
The school district or BOCES cooperative provides an orientation for beginning teachers	Yes	0	1	2	2	10	17	32
	No	0	0	0	0	0	1	1
	Total	0	1	2	2	10	18	33
The school district or BOCES cooperative provides mentoring for beginning teachers.	Yes	0	1	2	2	10	18	33
	No	0	0	0	0	0	0	0
	Total	0	1	2	2	10	18	33
The school district or BOCES cooperative adjusts the work conditions of beginning teachers.	Yes	0	0	1	0	4	9	14
	No	0	1	1	2	6	8	18
	Total	0	1	2	2	10	17	32
Release time for beginning teachers to take part in induction events potentially occurring during the contracted school day	Yes	0	1	2	1	6	15	25
	No	0	0	0	1	4	3	8
	Total	0	1	2	2	10	18	33
The school district or BOCES cooperative provides professional development opportunities for beginning teachers	Yes	0	1	2	2	10	18	33
	No	0	0	0	0	0	0	0
	Total	0	1	2	2	10	18	33

Table 1 continued

		50,000 or more students	21,000 to 49,999 students	10,000 to 20,999 students	5,000 to 9,999 students	1,000 to 4,999 students	Less than 1,000 students	Total
The school district or BOCES cooperative provides beginning teachers opportunities for collegial collaboration.	Yes	0	1	2	1	10	17	31
	No	0	0	0	1	0	1	2
	Total	0	1	2	2	10	18	33
The school district or BOCES cooperative directs mentors to assess beginning teachers and provide constructive feedback that is non-evaluative	Yes	0	1	1	2	7	13	24
	No	0	0	1	0	3	4	8
	Total	0	1	2	2	10	17	32
The school district or BOCES cooperative evaluates beginning teacher induction effectiveness including cost-effectiveness of the program.	Yes	0	1	2	2	5	8	18
	No	0	0	0	0	5	10	15
	Total	0	1	2	2	10	18	33
The school district or BOCES cooperative provides follow-up support for beginning teachers needing assistance in years two and three	Yes	0	1	1	2	10	14	28
	No	0	0	1	0	0	4	5
	Total	0	1	2	2	10	18	33

CHAPTER V

SUMMARY AND IMPLICATIONS

How do you maintain passion and excitement in beginning teachers beyond the first day of school? Every year, thousands of beginning teachers enter classrooms filled with dreams and plans for their students and the year ahead. Then 50% of those passion-filled beginning teachers opt out of the profession in June (Ingersoll & Smith, 2004; Park, 2003). What is missing between August and June that, if provided, would help retain those beginning teachers as well as nurture their passion for the profession? Although not a conclusive solution, beginning teacher induction programs containing multiple components could help provide potential answers to these questions (Horn et al., 2002) and provide motivation for key players in the state of Colorado and school districts within the state to move in the direction of comprehensive teacher induction for all beginning teachers.

Purpose of the Study

The purpose of the study was to gain a deeper understanding of teacher induction in the state of Colorado. The following research question guided this study

Q1 What components do Colorado school districts include as part of their beginning teacher induction?

The study examined the implementation of nine teacher induction components: orientation, mentoring, adjustments of working conditions, release time, professional

development opportunities, opportunities for collegial collaboration, assessment of beginning teachers, program evaluation, and follow-up (Arends & Rigazio-DiGilio, 2000). The purpose of this chapter is to address claims made within Chapter I pertaining to the impact of beginning teacher induction programs, how the data supported or rejected these claims, and, finally, make suggestions for additional research about the teacher induction components present in Colorado districts as well as the need for additional research regarding teacher induction programs as a means of reducing attrition. In addition, practice recommendations for school district leaders in the state of Colorado are suggested.

Findings and Implications

After reviewing the data analyses for this study, evidence indicated beginning teacher induction and its nine components were being implemented in numerous districts across the state of Colorado. Although the responding sample was only 19% of the proposed sample, consistency in implementation was found across districts regardless of district size. The responding districts were the most interested districts and their willingness to share what they were doing indicated a need for the information to be gathered. In addition, induction components most likely to be left out were similar across the school districts in the state of Colorado.

The first claim pertaining to beginning teacher induction programs made the statement that induction programs containing six or more components increased the retention of beginning teachers. Research has shown that beginning teachers who are supported through a comprehensive induction program consisting of six or more induction components are more likely to remain in the profession and are more likely to

be successful (Ingersoll, 2012). Ingersoll and Kralick (2004) found beginning teachers who participated in induction programs containing six key components showed a 14% reduction in the rate of attrition. Arends and Rigazio-DiGilio (2000) found teacher induction programs that included multiple areas of support provided the support needed to retain beginning teachers in the profession. According to the current study, teachers from the responding districts were participating for the most part in induction programs containing six or more induction components. The data did not support the claim that beginning teacher induction programs containing six or more components increased retention rates because retention data were not gathered and compared with the study's data. Retention in the state of Colorado continues to be an issue as the highest rate of attrition in the last 15 years occurred in 2015 (Zubrzycki, 2015); therefore, the teacher induction programs being provided did not appear to be impacting retention.

Within the current study, the data indicated program evaluation of teacher induction programs did not occur regularly in the participating districts. The survey data indicated a split between responding districts regarding the evaluation of induction programs at the district level. Eighteen of the reporting districts evaluated their programs while 15 did not; however, the low return rate does not support a generalization across districts in the state. When a program is provided and not evaluated, the effectiveness of the program comes into question (Arends & Rigazio-DiGilio, 2000). The lack of program evaluation potentially impacts the effectiveness of the programs being provided, which in turn potentially impacts the retention of teachers in the participating districts. In addition, if a program evaluation does not include key stakeholders, does not look at the cost effectiveness of the components, and neglects to ascertain the satisfaction of

participants and the usefulness of the program, then the potential impact of the program is compromised (Britton et al., 2000).

The second claim pertaining to teacher induction regarded the fiscal impacts teacher induction programs could have on school districts. An estimate of the cost when a new teacher leaves a school has been quoted as totaling approximately $12,000 in rehiring expenses (Fallon, 2004). If this expense equals 50% of what a beginning teacher earns, then there can be a potential return of approximately 25% for every dollar spent on teacher induction programs (Villar & Strong, 2007). In the state of Colorado, funding is available to school districts through Title II, Part A of the Elementary and Secondary Education Act (Colorado Department of Education, 2011). Educational funding in the state of Colorado has been difficult for the past several years. Constitutionally, the state has committed to increases in funding by inflation plus 1% from 2001-2011 and then increase by inflation alone after that (Great Education Colorado, 2015). The state of Colorado has identified per pupil funding and then has instituted a "negative factor," reducing the amount of funding districts receive. Therefore, districts are receiving much less than the state budgeted. Unfortunately, the research conducted for this study did not address the fiscal implications districts might or might not be experiencing and the potential impacts on retention if funding was provided for teacher induction. Investment in induction could lead to a higher quality program or system and decrease the need for constant retraining of beginning teachers.

The third claim maintained the consistency in delivery is an important consideration. Although the state of Colorado and school districts within Colorado might be aware of the potential comprehensive induction programs hold for their new teachers,

there was no consistency across the state from district to district and sometimes even from school to school with regard to teacher induction programs and their implementation (R. Ley, Mountain BOCES Teacher Induction Director, Personal communication, March 15, 2015). Due to these inconsistencies, very few if any inductees are being served adequately, even in the spirit of the statute if all six of the elements shown through research to support new teachers are not consistently available in every district (Ingersoll, 2012). In the initial writing of the Colorado state statute (2005), the state of Colorado covered the basics and left the details up to school districts. Colorado is a local control state, which means most of the public education decisions are made by the school district administrations and their school boards (Colorado Department of Education, 2012). The state has the power to prescribe the essential elements of a teacher induction program, although that power has not been utilized.

Respondents to the survey were provided with the following definition of beginning teacher induction: Beginning teacher induction is a purposeful program with the intent of providing systematic and sustained assistance for beginning teachers for at least one year. In the responding districts, teacher induction as a program was present in 32 of 33 (97%) districts, indicating an understanding of the teacher induction definition and confirmation of the provision of teacher induction within these school districts. The current study provided proof the responding districts were indeed providing beginning teacher induction. The current study did not account for the potential differences in content, delivery, and consistency across responding districts. The level and depth of implementation as well as the content of components was not clear through the current study data. Research was clear--beginning teacher induction programs that are

comprehensive and provided consistently across a state increase retention (Arends & Rigazio-DiGilio, 2000). However, a request to provide funding for a state mandated induction program containing the essential components to provide consistency and potentially impact teacher retention was not supported through this study's data.

Limitations

Several limitations might have affected this study. First, those who responded were potentially those who had an interest in the topic. The survey was sent out at the beginning of summer, a time when many school district leaders were potentially on vacation. The timing of the survey might have affected the sample size, which in turn affected the statistical significance of the study. The survey was sent to superintendents and BOCES executive directors for completion; if they were not the persons responsible for teacher induction, they were asked to forward the email to those who were responsible. It was not clear if those respondents opening the survey initially understood this and actually forwarded it to the persons who could have responded to the survey. In addition, a strategy to increase potential responses through contact of non-respondents was not carefully thought through and written within the IRB proposal. Upon discovering this was not included, the researcher contacted the IRB to discuss revising the proposal to include provisions for contacting non-respondents. The IRB was not in favor of revising the proposal. Therefore, non-respondent data could not be gathered, which might have added to the initial survey content.

The survey asked questions requiring only a "yes" or "no" answer. This type of question only allowed for the identification of whether or not an induction component was included in a district plan but not the level to which it was implemented. If questions

had been asked with the intent of gathering more detailed information about the induction components and their sub-categories, they might have given a deeper understanding of the level of implementation as well as specifics within the implementation such as intensity and requirements for completion. Teacher induction is most often left to district or school interpretation (Bartell, 2005). In addition, induction models vary in components included, intensity in implementation, and requirements for completion (Brooks, 2005). Further, due to the simplicity of the questions, generalizations could not be made across all districts within the state.

Research Recommendations

A recommendation that surfaced from one of the limitations of the study was the need to conduct the survey again during the school year and with a contingency plan to gather information from non-respondents. In addition, clearer communication within the emails about the study, its importance, those persons who could fill it out, as well as a postcard sent prior to the beginning of the survey activation would likely have helped increase the level of participation. An adequate response rate would be in the 50-70% range (Nulty, 2008). While most online surveys garner less than 30% (Hager et al., 2003), a response rate of 19% was not viable for testing statistical significance.

Although the study gathered some information regarding teacher induction component implementation within school districts in the state, it did not give a clear picture regarding what specifically was implemented within each component. Fiscal impact questions pertaining to funding or lack thereof would also need to be added. Further research involving a mixed method with a survey to gather initial data around induction components provided, combined with interview data with school district

personnel questioning the specific provisions within each component, would help inform educational leaders and policy makers about what is truly provided within the state of Colorado as well as what is needed.

Finally, recommended teacher induction components were shown to be present in the majority of responding districts. The next step in the analysis would be to look at the retention rates of those districts. The question to be ascertained would be whether the provision of these induction components had an impact on the retention of teachers within the districts.

Discussion

My passion around the need for beginning teacher induction was reinforced during my nine years as an administrator in the state of Colorado. Each year, my school and district experienced high levels of beginning teachers entering the district with almost as high levels leaving the following spring. In the hiring of beginning teachers, an administrator does not truly know the scope of effectiveness a beginning teacher will have until they are actually in the trenches with the students. At this crucial time is when support for these teachers is most needed.

Colorado's Educator Effectiveness evaluation system (Colorado Department of Education, 2015) has the potential to provide school leaders with information specific to each teacher's specific areas of concern and strength. School leaders could use this information to direct the support a beginning teacher received through the induction process and set professional learning goals. The data from this study indicated induction components were being implemented; however, the data did not show how each component specifically supported teachers. The Colorado Educator Effectiveness

evaluation system, I believe, could help evaluate what beginning teachers need, provide guidance in the induction components, where to provide support, and aid in creating an effective teacher.

Beginning teacher induction and the results from this study are important because retention in the state of Colorado is at an all-time low (Zubrzycki, 2015). Data from this study indicated the responding districts were indeed providing beginning teacher induction. My question then is, "Why is retention so low if these components are being provided?" In my experience, I have found the components might indeed be present in a school district but the level of implementation and fidelity to the intent of the implementation were not present. School districts need to make the connection between the implementation of these components and the potential for retention of their beginning teachers.

I continue to be passionate about the support of beginning teachers through induction. One way I intend to use this data is in supporting my own district's initiatives for teacher induction through partnering with Mountain BOCES. I have chosen to be part of webinars being provided to beginning teachers currently in the induction program. I have also conferred with Rose Ley, the teacher induction director at Mountain BOCES, regarding the findings of this study and how we could better serve beginning teachers in our area.

I hope to conduct a further study that includes the survey and adds in interviews to gain a deeper understanding of what is specifically offered within each induction component in each of the responding districts. I believe data garnered from such a study would be beneficial in soliciting support across the state for beginning teacher induction.

Research shows teacher induction can positively impact retention and retention is something school district leaders need help understanding.

As an administrator for nine years, I had the opportunity to hire and work with more than 45 new teachers. First-year teachers needed extensive support from mentor teachers, the district teacher induction program, and myself. I have a strong belief in comprehensive teacher induction as a way to ensure every student in every school has an effective teacher every year.

Summary

Teacher induction and its many components have risen in importance in recent years due to the increased difficulty in retaining teachers for more than five years (Bolich, 2001). This study was conducted to gain a deeper understanding of teacher induction and its implementation within the state of Colorado. There had been no data describing induction practices in the state prior to this study. The study provided a glimpse into teacher induction practices in districts across the state by showing what components were being included in induction programs.

Survey items for this study were constructed using the nine teacher induction components indicated as important by Horn et al. (2002). Additionally, based on research by Dagenais (n.d.), the sub-categories for some of the components were further disaggregated. By researching school districts in the state of Colorado, evidence exists that these components and their sub-categories are being provided to beginning teachers although the extent and intensity are still an unknown.

The first years of a teacher's career are filled with many learning experiences and challenges. Comprehensive teacher induction programs could help beginning teachers

remain in the profession as well as increase their ability to be effective instructors (Shulman & Colbert, 1987). Findings in this study indicated teacher induction was present in Colorado in all district sizes but did not paint a clear picture as to whether this had an impact on teacher retention, an area that requires further research.

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APPENDIX A

INDUCTION COMPONENT SURVEY

Induction Component Survey

Definition

Beginning teacher induction: a purposeful program with the intent of providing systematic and sustained assistance to beginning teachers for at least one year[1].

Q1 The school district or BOCES cooperative provides teacher induction for all beginning teachers.

- ❍ Yes (1)
- ❍ No (2)

If No Is Selected, Then Skip To This survey was intended to be comple...

Definition

Orientation: a teacher induction component which introduces new teachers to the district, its mission, vision, and goals, as well as the main facets of the school in which they will be teaching[2].

Q2 The school district or BOCES cooperative provides an orientation for beginning teachers.

- ❍ Yes (1)
- ❍ No (2)

If No Is Selected, Then Skip To The school district or BOCES cooperat...

Q3 Orientation occurs before the school year begins.

- ❍ Yes (1)
- ❍ No (2)

Q4 Orientation is...

- ❍ one half day to three days in length. (1)
- ❍ one full week. (2)
- ❍ Click to write Choice 3 (3)

Definition

Mentor: a veteran teacher who has been partnered with a beginning teacher to provide "systematic and sustained assistance[3].

Program scope: a scope and sequence for mentors to follow in giving support to beginning teachers.

Training: training for mentors, which includes an understanding of adult development and learning, supervision, relationship building, and communication skills.

Selection and assignment: district or BOCES determined guidelines for mentors, including but not limited to, years of experience, years in the district, desire and willingness to serve as a mentor.

Program evaluation: an internal audit of the program to determine effectiveness, conducted at least every other year.

Q5 The school district or BOCES cooperative provides mentoring for beginning teachers.

- ❍ Yes (1)
- ❍ No (2)

If No Is Selected, Then Skip To The school district or BOCES cooperat...

Q6 The school district or BOCES cooperative has a set program scope for mentoring.

- ❍ Yes (1)
- ❍ No (2)

Q7 The school district or BOCES cooperative provides training for the mentors of beginning teachers.

- ❍ Yes (1)
- ❍ No (2)

Q8 The school district or BOCES cooperative has a selection and assignment process for mentors and beginning teachers.

- ❍ Yes (1)
- ❍ No (2)

Q9 The school district or BOCES cooperative regularly evaluates the mentor program.

- ❍ Yes (1)
- ❍ No (2)

Definition

Adjustment of working conditions: can include, but is not limited to, reduction in class size, reduction in the number of courses a beginning teacher is responsible for[4], and increased planning time for beginning teachers[5, 6].

Q10 The school district or BOCES cooperative adjusts the work conditions of beginning teachers.

- ❍ Yes (1)
- ❍ No (2)

If No Is Selected, Then Skip To The school district or BOCES cooperat...

Q11 The school district or BOCES cooperative provides decreased class size or fewer class periods to prepare for as a support for beginning teachers.

- ❍ Yes (1)
- ❍ No (2)

Q12 The school district or BOCES cooperative provides increased planning time during the school day for beginning teachers.

- ❍ Yes (1)
- ❍ No (2)

Definition

Release time: time, during the contracted school day, when beginning teachers are given the opportunity to take part in induction events, including but not limited to, observation of mentors and peers, team planning, collaborative problem solving, and reflection[7, 8].

Q13 The school district or BOCES cooperative provides release time for beginning teachers to take part in induction events potentially occurring during the contracted school day.

- ❍ Yes (1)
- ❍ No (2)

If No Is Selected, Then Skip To The school district or BOCES cooperat...

Q14 The school district or BOCES cooperative provides beginning teachers opportunities to observe mentors and peers.

- ❍ Yes (1)
- ❍ No (2)

Q15 The school district or BOCES cooperative provides beginning teachers release time for team planning and/or collaborative problem solving and reflection.

- ❍ Yes (1)
- ❍ No (2)

Definition

Professional development: opportunities designed around real-time experiences and problems and that are sustained through collaboration and reflection over time[9].

Q16 The school district or BOCES cooperative provides professional development opportunities for beginning teachers.

- ❍ Yes (1)
- ❍ No (2)

If No Is Selected, Then Skip To The school district or BOCES cooperat...

Q17 The professional development opportunities are...

- ❍ 0-10 hours (1)
- ❍ 10 hours or more (2)
- ❍ Click to write Choice 3 (3)

Definition

Collegial collaboration: collaboration among and with other teachers, both beginning and veteran, which encourages teamwork and a learning community[10].

Q18 The school district or BOCES cooperative provides beginning teachers opportunities for collegial collaboration.

- ❍ Yes (1)
- ❍ No (2)

Definition

Mentor evaluation: assessment of beginning teachers which is formative in nature and does not contain an evaluative component that is conducted by the mentor teacher[11].

Q19 The school district or BOCES cooperative directs mentors to assess beginning teachers and provide constructive feedback that is non-evaluative.

- ❍ Yes (1)
- ❍ No (2)

Definition

Program evaluation: evaluation of the induction program, which includes any and all participants or stakeholders. The evaluation should focus on the satisfaction of the participants, the usefulness of the program, as well as the attainment of intended goals[12].

Q20 The school district or BOCES cooperative evaluates the beginning teacher induction program regularly to monitor for effectiveness, including cost-effectiveness of the program.

- ❍ Yes (1)
- ❍ No (2)

Definition

Follow-up: support provided to teachers in their second and/or third years, as needed.

Q21 The school district or BOCES cooperative provides follow-up support for beginning teachers needing assistance in years two and three.

- ❍ Yes (1)
- ❍ No (2)

Q22 This survey was intended to be completed by the superintendent, assistant superintendent, or BOCES cooperative executive director for your district. What is your position?

- ❍ Superintendent (1)
- ❍ Assistant Superintendent (2)
- ❍ BOCES Executive Director (3)
- ❍ Other (4)

If Superintendent Is Selected, Then Skip To End of Survey If Assistant Superintendent Is Selected, Then Skip To End of Survey If Other Is Selected, Then Skip To If you are not the superintendent or ...If BOCES Executive Director Is Selected, Then Skip To If you are a BOCES executive director...

Q37 If you are not the superintendent or assistant superintendent, what is your job title in the district?

- ❍ Curriculum Director (1)
- ❍ Human Resource Director (2)
- ❍ Other (3) _____

Q38 If you are a BOCES executive director, what are the sizes of school districts you serve?

- ❑ 50,000 or more students (1)
- ❑ 21,000 to 49,999 students (2)
- ❑ 10,000 to 20,999 students (3)
- ❑ 5,000 to 9,999 students (4)
- ❑ 1,000 to 4,999 students (5)
- ❑ Less than 1,000 students (6)

Q39 What is the size of your district?

- ❍ 50,000 or more students (1)
- ❍ 21,000 to 49,999 students (2)
- ❍ 10,000 to 20,999 students (3)
- ❍ 5,000 to 9,999 students (4)
- ❍ 1,000 to 4,999 students (5)
- ❍ Less than 1,000 students (6)

APPENDIX B

EMAIL NOTIFICATION

Email Notification

My name is Myra Desha Bierbaum and I am a doctoral candidate at the University of Northern Colorado. I am conducting research on teacher induction components in school districts across the state of Colorado. I am interested in teacher induction components because, as an administrator in the state, I found many new teachers needed substantial support in order to be successful in the classroom. Teacher induction is one of the ways to help provide support for these beginning teachers.

This project is designed to gain a deeper understanding of teacher induction in the state of Colorado. You are being invited to participate in an online survey about teacher induction components and their implementation within your school district. The questionnaire should take a minimum of 20 minutes.

Attached to this email is a letter with a link to a short survey about teacher induction components. I would greatly appreciate your participation in the study through completion of the survey. Thank you in advance for your help and support! I would be happy to share my findings with you at your request!

Sincerely,
Myra Desha Bierbaum

APPENDIX C

INSTITUTIONAL REVIEW BOARD APPROVAL

UNIVERSITY of NORTHERN COLORADO

Institutional Review Board

DATE:	June 3, 2015
TO:	Myra Desha Bierbaum
FROM:	University of Northern Colorado (UNCO) IRB
PROJECT TITLE:	[756329-2] Comprehensive Induction Components Implemented by Colorado School Districts
SUBMISSION TYPE:	Amendment/Modification
ACTION:	APPROVAL/VERIFICATION OF EXEMPT STATUS
DECISION DATE:	May 22, 2015

Thank you for your submission of Amendment/Modification materials for this project. The University of Northern Colorado (UNCO) IRB approves this project and verifies its status as EXEMPT according to federal IRB regulations.

Hello Ms. Bierbaum,

Thanks so much for your modifications. Your IRB application is approved and good luck with this research.

Sincerely,

Nancy White, PhD, IRB Co-Chair

We will retain a copy of this correspondence within our records for a duration of 4 years.

If you have any questions, please contact Sherry May at 970-351-1910 or Sherry.May@unco.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within University of Northern Colorado (UNCO) IRB's records.

APPENDIX D

CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH

UNIVERSITY of NORTHERN COLORADO

CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH
UNIVERSITY OF NORTHERN COLORADO

Project Title: Teacher Induction Components in the State of Colorado
Researcher: Desha Bierbaum, Ed.D., School of Teacher Education
Phone Number; (970)309-3793 e-mail: bier6772@bears.unco.edu
Research Advisor: Dr. Linda Vogel, (970)351-2119 e-mail: lrvogel_1122@yahoo.com

Purpose and Description: This project is designed to gain a deeper understanding of teacher induction in the state of Colorado. You are being invited to participate in an online survey about teacher induction components and their implementation within your school district. The questionnaire should take a minimum of 20 minutes.

The questionnaire will provide detailed information about teacher induction components, the presence or absence of these components in district programs, as well as the extent of implementation. The researcher will code the information using descriptive statistics to examine patterns in induction components and implementation across districts in the state.

At the end of the research study, I would be happy to share the findings with you at your request. I will take every precaution in order to protect your confidentiality. I will assign a subject number to you and I will be the only person who will know the name connected with the subject number. When I report the data, your name will not be used. Demographic information collected will only be used for general disaggregation, but will not be attached to individual participants. Data collected and analyzed for this study will be kept in a password-protected file, which is only accessible by the researcher.

There are no identified risks in participation in this project. However, benefits could include a better understanding of teacher induction components and their implementation in the state of Colorado, and therefore aid in defining the critical components for comprehensive teacher induction for beginning teachers. Although the study could potentially be published, all participants, and school districts will be written about using pseudonyms.

Participation is voluntary. You may decide not to participate in this study and if you begin participation you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled. Having read the above and having had an opportunity to ask any questions please click here to complete the survey if you would like to participate in this research. By completing the survey, you give me permission for your participation. You may keep this form for future reference. If you have any concerns about your selection or treatment as a research participant, please contact the Office of Sponsored Programs, Kepner Hall, University of Northern Colorado, Greeley, CO 80639; 970-351-1910.